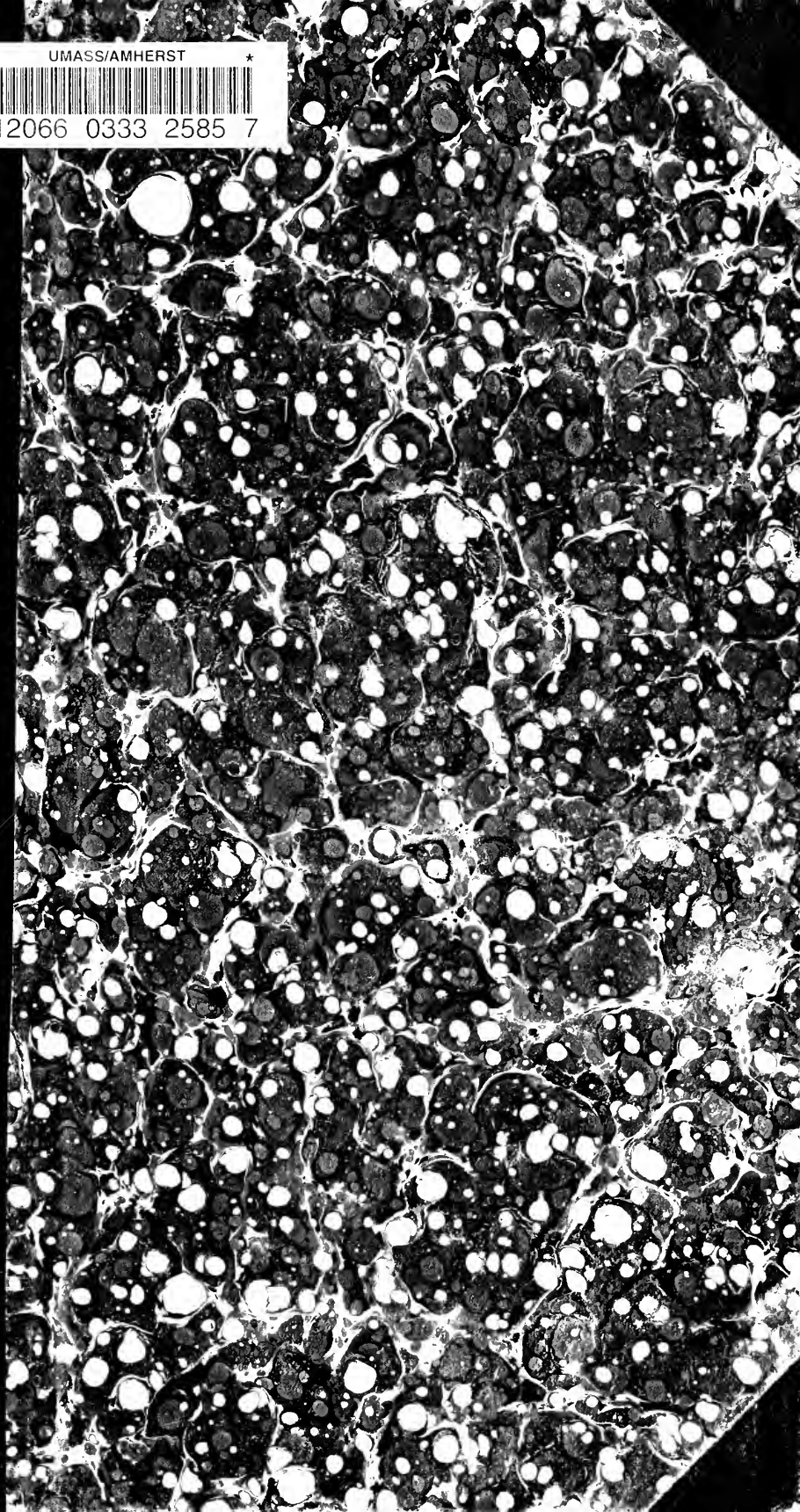


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MASSACHUSETTS
CROP REPORT

FOR THE

MONTH OF MAY, 1892.

ISSUED BY

WM. R. SESSIONS
SECRETARY STATE BOARD OF AGRICULTURE.

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1892.

CROP REPORT FOR THE MONTH OF MAY, 1892.

OFFICE STATE BOARD OF AGRICULTURE,
BOSTON, MASS., June 1, 1892.

With this number commences the series of Crop Reports for the season of 1892. It is the intent to issue at least six monthly bulletins during the season. These bulletins will be made up partly from data received from more than one hundred and sixty selected correspondents in different parts of the State, by means of blanks sent to them monthly; partly from data gleaned from the United States Weather-Crop Bulletins; and partly from data furnished by the New England Weather Service. The table and synopsis of Massachusetts weather will be furnished by the Weather Service. These bulletins will be mailed as issued to those who have received bulletins in past seasons, and to any other persons who may make application for them. Arrangements have also been made with the Director of the New England Weather Service whereby weekly crop reports will be sent to those who receive our monthly bulletins. These weekly reports will be mailed Tuesdays, beginning about the middle of June and continuing as late in the season as the funds we can use for this purpose will allow. It will be found necessary, therefore, to reduce the size of our monthly bulletins and somewhat condense the notes of correspondents in order to lessen the expense. It is hoped that the new plan will meet with the approval of correspondents and other interested parties.

OUTLOOK FOR THE SEASON.

In our circular to correspondents returnable May 28, the first question asked was, "How does the present season compare, agriculturally speaking, with last season?"

Last year the general opinion seemed to be that the month of June opened under less favorable conditions, agriculturally speaking, than was true of the previous year.

Most of the correspondents in answer to the above question refer to the present season as being either late or backward. A number refer to it as being cold. Some speak of it as being an average season and a number as being favorable though late. A few state that they consider the season less favorable than last.

The second question asked was, "Does the season now promise to be a favorable one for the farmer?"

Last year in answering this question the correspondents were about evenly divided in their opinion as to the outlook for the future. This year ninety-six correspondents answer yes to the above question; four that the season promises to be an average one; and eleven that it does not promise to be an average one. On account of a dry April and cool, wet weather in May, the outlook for the hay crop is excellent. Planting, however, has been delayed and considerable seed has failed to germinate.

Report No. 94 (April, 1892) of the Statistician of the United States Department of Agriculture states that the April returns make the average condition of winter wheat on the 1st of April, 81.2. The seeding was generally late, in the west especially, and in the south-west later than in the States of the Atlantic coast. A comparatively mild winter, with a general abundance of forage, has been favorable for a high general average in the condition of horses, and they have been quite free from serious disorders during the past year. The percentage of losses is lower than for two years past, being 1.5 per cent, as against 1.7 in 1891 and 1.6 in 1890. The number of horses in Massachusetts is given as 64,464; losses, 1,096, or 1.7 per cent. The average condition of stock throughout the country falls below that of the previous two years, when it was relatively high, the average for 1890 being 94.1; that of 1891, 95; and that of 1892, 93.2, out of a possible 100. The losses for the past year, both on account of winter exposure and from all other causes, have been less than for the preceding year. The number of milch cows, oxen and other cattle in Massa-

Massachusetts is given as 273,275 ; losses, 3,006, or 1.1 per cent. The condition of sheep is almost uniformly high, the result of a comparatively mild winter, good care and a sufficient supply of food. The losses of sheep during the past year were lighter than during any recent season. The importance of this class of animals in the economy of the farm is each year better appreciated. The number of sheep in Massachusetts is given as 57,644 ; losses, 980, or 1.7 per cent. More damage was done to sheep by dogs than by disease. The condition of swine at the close of the winter is considerably better than at the same date a year ago. The swine of the country have been healthful, being free to an unusual extent from either fatal or trifling disorders during the past year. It naturally follows that the aggregate loss from diseases of all character must be small. The percentage of loss amounts to but 5.4, the smallest return in any recent year. The number of swine in Massachusetts is given as 66,536 ; losses, 932, or 1.4 per cent. The condition of the different classes of farm animals, as reported for Massachusetts, is : horses, 98 ; cattle, 94 ; sheep, 100 ; swine, 98.

Report No. 95 (May, 1892) states that the past month has been only moderately favorable for wheat, and the advance in condition is only from 81.2 to 84. The season to May 1 has been somewhat unfavorable for grasses in almost all sections of the country, while in some it has been such as to work permanent injury. The consolidated returns for meadow and mowing lands make an average of but 89.6, and for pasture 87.5, against 97.2 and 97.8, respectively, last year. The proportion of spring ploughing usually done on the 1st of May is a little above three-fourths for the whole country. The present season has been cold and unfavorable for rapid progress of spring work, and the proportion returned as done is only 64.6 per cent. Taking the country as a whole, there is in ordinary years but little fluctuation in the comparative area devoted to the principal crops, but there are always local changes affecting the cropping of different districts. For a number of years there has been a marked tendency toward increase of grass area, which still continues. The most marked change of the year is the reduction of the cotton acreage, which is reported from

almost every county in the belt. The large crop of potatoes which was grown last year in almost all districts of production resulted in low prices and consequent disappointment to growers. From this cause the acreage this year in New England, in the States of the central west, and in the mountain regions, will be considerably reduced, the breadth thus freed being given to corn in the east, and to various other crops in the west. The acreage of tobacco in the Connecticut valley, in Pennsylvania, and in Wisconsin, will be very largely increased on account of the materially higher prices which have ruled for domestic product since the exclusion of Sumatra tobacco from our markets by the operation of the present customs law.

INSECTS.

The third question asked was, "What insects appear to be doing the most damage in your neighborhood, and what measures are being taken to prevent their ravages?" Most of the correspondents refer to the presence of the tent caterpillar, and some state that active measures are taken to at least keep it out of the orchards. Others report that practically no attention is paid to it. Of the methods used in destroying it, hand picking or cleaning seems to be regarded as the most satisfactory in results. A number state that they do not think it as numerous as last year, owing perhaps to a cold, wet May. Last year nearly every correspondent reported the presence of this insect. Several refer to the asparagus beetle, currant worms, cut worms and fire worms. The correspondent in Dighton refers to the appearance of a new insect on the strawberry plant. This insect looks like the spindle worm on corn, and bores downward into the crown of the plant, killing the fruit stalk. It is thought that insects are troubling the farmers less this season than usual.

FARM HELP AND WAGES.

The fourth question asked was, "Is it difficult to get first-class help, and what wages, excluding board, are paid such per month?" Nearly all the correspondents are agreed that it is very difficult to get first-class farm help. Some go so far as to state that it is impossible to get it. In our Crop

Report for May, 1890, there is found the following: "Nearly all the correspondents report that it is quite difficult to get first-class farm help, and \$20 to \$25 per month and board would be a fair average of the wages paid." In Berkshire County, this season, according to the returns of correspondents, the range is from \$12 to \$30 per month and board; in Franklin, \$10 to \$35; in Hampshire, \$17 to \$40; in Hampden, \$6 to \$45; in Worcester, \$18 to \$50; in Middlesex, \$18 to \$30; in Essex, \$18 to \$30; in Norfolk, \$20 to \$45; in Bristol, \$18 to \$35; in Plymouth, \$20 to \$25; and in Barnstable, \$16 to \$33. The lowest figures evidently are for green emigrant help and the highest for foremen and managers of farms. Judging by the returns, it is thought that the average is between \$20 and \$25 per month. Board is estimated at about \$12 per month. It will be noticed that these figures are in excess of those furnished by the United States Department of Agriculture, but it should be borne in mind that our figures refer to first-class help, while those of the Department include all grades and classes.

The following interesting items relative to farm help are gleaned from Report No. 4, Miscellaneous Series, Division of Statistics, of the United States Department of Agriculture, which has recently been issued:—

The investigations of rates of wages for farm labor, nine of which have been made during the past twenty-six years, have been very complete in method and satisfactory in result. Beginning when labor was in demand to repair the wastes of war, the average rates were high, gradually declining, finding lowest level in 1879, then rising to a normal status, which has been maintained with wonderful uniformity during the last ten years.

Wages are highest in the Pacific coast States. The mountain States hold second place. The agricultural labor of New England is dear because of its scarcity, caused by the great variety of manufacturing industries, which make a demand for every kind of available labor. The difference between wages with and without board, at various dates in the several geographical divisions, affords an opportunity for interesting study. This difference stands practically for the cost of board, and represents variation in prices of prod-

ucts consumed and in the average rations of the several groups. Not only are striking differences shown to exist in groups of States, and greater still in individual State averages, but in every State there is variation in its county rates, due to the same causes which operate to differentiate the wages of geographical sections. One of these causes is density of population, as in the neighborhood of cities, which results in high rents and dear food, and wages corresponding. While farmers have suffered from low prices of certain products, they have been unable to reduce the rate of wages.

It might be supposed the depression in agriculture, of which so much has been said and written, would be attended with a decline in the rate of compensation paid for labor. This has not taken place. The demand is well sustained. Wages have not declined. On the contrary, a careful analysis of all the data collected concerning farm wages from 1840 to 1865, in comparison with results of the more recent investigations, will show that in fifty years the compensation of farm labor has very nearly doubled. Many a farmer complains that labor costs too much, that values of products do not warrant the rates demanded, and yet he must have it and promptly makes the engagement. It is the compulsion of competition, an indication of general employment and a fair degree of prosperity.

In comparison with other countries, American farm labor stands first in rate of compensation. The present rate of \$282 per annum for labor of the Caucasian race can scarcely be approached by any country unless by Australia. According to the above report, the wages per month without board by the year or season for Massachusetts were \$38.94 in 1866, \$35.95 in 1869, \$31.87 in 1875, \$25.00 in 1879, \$30.66 in 1882, \$28.75 in 1885, \$29.50 in 1888, \$30.00 in 1890 and \$29.70 in 1892; wages with board were \$22.36 in 1866, \$22.16 in 1869, \$20.25 in 1875, \$15.33 in 1879, \$18.25 in 1882, \$17.85 in 1885, \$18.00 in 1888, \$18.50 in 1890 and \$18.00 in 1892. Average day wages paid for transient service in harvest: \$2.41 in 1866, \$2.37 in 1869, \$1.90 in 1875, \$1.50 in 1879, \$1.75 in 1882, \$1.70 in 1885, \$1.80 in 1888 and \$1.80 in 1890; with board the wages were \$1.92 in 1866, \$1.95 in 1869, \$1.50 in 1875, \$1.00 in 1879,

\$1.35 in 1882, \$1.31 in 1885, \$1.38 in 1888 and \$1.38 in 1890. Average rate of day wages paid for ordinary farm labor, without board, was \$1.83 in 1866, \$1.92 in 1869, \$1.44 in 1875, \$1.05 in 1879, \$1.45 in 1882, \$1.50 in 1885, \$1.42 in 1888, \$1.45 in 1890 and \$1.42 in 1892; for same with board, \$1.38 in 1866, \$1.37 in 1869, \$1.12 in 1875, \$0.75 in 1879, \$1.08 in 1882, \$1.00 in 1885, \$1.00 in 1888, \$1.00 in 1890 and \$0.98 in 1892.

TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

FROM UNITED STATES WEATHER-CROP BULLETINS.

Week ending May 6. — Warmer than usual generally throughout the Southern States, the Ohio valley and the Middle Atlantic States, the excess being the greatest over the Ohio valley and the interior of the Southern States, where it ranged from 6° to 9° per day. More rain than usual generally throughout the Northern States, the belt of excessive rain extending from New England westward to the Pacific coast. There was a total absence of rain over a large portion of the Southern States.

Week ending May 13. — Cool weather continues generally throughout all agricultural districts, except in the southern portion of the Gulf States and along the Middle Atlantic and New England coasts, where the temperature during the past week differed but slightly from the normal. The season continues late in all agricultural districts. The rainfall of the week was largely in excess generally throughout the States of the Mississippi, Missouri and lower Ohio valleys. Much-needed rains occurred in the southern portion of the South Atlantic States.

Week ending May 20. — Cold and unfavorable weather continues in the central valleys and north-west. About the normal temperature has prevailed in New England. The season continues cool and backward throughout all agricultural districts, although it is rapidly recovering in the Southern States and along the Atlantic coast. Excessive rains continue throughout the central valleys, attended by destructive floods resulting in the loss of many lives and great damage to crops in the Mississippi and Missouri valleys.

Week ending May 27. — The cool weather has continued in all districts east of the Rocky Mountains. It was from 3° to 6° cooler than usual along the Atlantic coast and in the north-west. The season continues late in all districts east of the Rocky Mountains. Excessive rains occurred during the week throughout New England, the Middle Atlantic States and lower lake region. The seasonal rainfall continues largely in excess throughout the central valleys, the lake regions and the Middle Atlantic States.

CONDITION OF CROPS IN THIS SECTION.

FROM UNITED STATES WEATHER-CROP BULLETINS.

Week ending May 6. — New England: Temperature average, but precipitation above, except in Maine and western Connecticut; sunshine average, except along the coast; weather very favorable, except too cold in northern portion, where the season is backward; fruit and buds starting well.

Week ending May 13. — New England: Temperature below; precipitation below in north-east, central and south-west sections; sunshine average. Season backward. Rain was of great value. Warmer weather needed. Potatoes being planted; some corn planted in southern portion. Fruit promises well.

Week ending May 20. — New England: Precipitation above average, except in extreme north and north-east portions; temperature below, and sunshine average. Slight frost on the 19th, little damage; snow in northern portion on the 20th; potato planting well along; favorable week; tobacco late.

Week ending May 27. — New England: Precipitation above and temperature and sunshine below average; snow-storms in northern portions delayed planting and caused much suffering among sheep and cattle; no damage to fruit anticipated; acreage of all farm crops above average.

MASSACHUSETTS WEATHER.

Meteorological Data for May, 1892.

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Cloudy.	Partly Cloudy.	Cloudless.
Adams, .	55.6	81	31	31	1	—	16	—	—	—	—
Springfield, .	57.8	83	31	37	22	6.96	15	—	—	—	—
Amherst, .	54.0	81	31	30	1	5.49	16	—	—	—	—
Turner's Falls, .	54.8	78	31	30	1	5.68	18	S.	—	—	—
Royalston, .	56.8	78	17	38	20	4.38	10	S. W.	—	—	—
Fitchburg, .	58.3	82	31	38	1, 21	6.43	15	—	—	—	—
Worcester, .	55.8	83	31	34	1	6.34	17	—	—	—	—
Dudley, .	54.1	82	31	34	1	4.74	16	—	—	—	—
Framingham, .	54.8	83	31	27	1	5.46	14	—	—	—	—
Concord, .	54.3	82	31	26	1	5.12	13	S. W.	—	—	—
Lowell, .	55.4	82	31	28	1	5.86	17	W. N. W.	12	17	2
Boston, .	55.9	78	26	39	1	5.15	14	W.	14	11	6
Taunton, .	55.6	80	16, 31	32	1	4.40	16	—	—	—	—
Provincetown, .	53.0	74	16	34	1	3.64	12	—	—	—	—

Summary.

Temperature (F). — Monthly mean, 55.4°. Highest monthly mean, 58.3° at Fitchburg; lowest monthly mean, 53° at Provincetown; maximum, 83° at Springfield, Worcester and Framingham on the 31st; minimum, 26° at Concord on the 1st; range, 57°; greatest local monthly range, 56° at Framingham; least local monthly range, 40° at Provincetown; greatest daily range, 36° at Framingham on the 10th; least daily range, 3° at Worcester on the 21st. Average temperature for May at Springfield for twenty-five years, 59.2°; average for May, 1892, 57.8°; departure, —1.4°. Average temperature for May at Boston for twenty-two years, 56.2°; average for May, 1892, 55.9°; departure, —0.3°.

Precipitation. — Average, 5.36 inches; greatest, 6.96 at Springfield; least, 3.64 at Provincetown. Average for May at Springfield for forty-five years, 4.14 inches; for May, 1892, 6.96; departure, +2.82. Average precipitation for May at Boston for twenty-two years, 3.56; for May, 1892, 5.15; departure, +1.59.

Prevailing wind. — South-west.

Thunder storms. — Occurred on 2d, 3d, 4th, 12th, 26th, 27th.

Solar Halos. — 2d, 5th.

Lunar Halo. — 10th.

Frosts. — 1st, 8th, 19th.

Auroras. — 16th, 18th (very brilliant and visible over all New England).

Advance of Season. — The season throughout the month was about one week behind the average. At Fitchburg, apple blossoms came out on the 25th, two days behind the average for thirty-six years.

REMARKS.

The weather for Massachusetts for the month of May, 1892, was characterized by an excess of rainfall and number of rainy days and an unusually high mean wind velocity. The mean temperature was slightly below the average and the monthly range was strong. The mean air pressure was also slightly below the average. There was an excess of westerly and northerly winds and less southerly and easterly winds than usual.

The precipitation for the month was greatest in the central and western districts and least on the coast. The storm of the 20th to 23d was light on the coast, but heavy in the interior; no particular damage was done beyond washing a few seeds from the ground and causing a few to rot on wet ground. As the bulletin for October — the last of the series for 1891 — reported an unusually early snow-storm, so in this the first of the bulletins for 1892 we report a remarkably late snow-storm, on the 20th. This was felt only on the western highlands, but was severe there as well as in Vermont and New Hampshire. In the latter States many sheep died from exposure and cattle and horses suffered. The observer at Savoy, Mass., reports it to be the hardest storm of the season: the temperature during the storm was but little above freezing and the snow was accompanied by heavy wind.

June Weather.

The following data compiled from the records of the Weather Bureau station at Boston for a period of twenty-one years may prove of interest, showing as they do the average and extreme conditions of some of the more special features and variations of our weather, and the range within which such variations may be expected to keep during the month of June.

The warmest June was that of 1883, with an average of 69°. The coldest was in 1881: average, 61°. The highest temperature was 98° on the 29th in 1874, and the lowest 42° on the 2d, 1884.

The average precipitation for the month of June is 3.28 inches, and the average number of rainy days 11. The greatest amount fell in 1881, 7.79 inches: the least in 1873, 0.54 inch. The greatest amount recorded in any twenty-four consecutive hours was 5.35 inches on June 9-10, 1875.

WEATHER FORECASTS.

The sixth question asked was, "What are the views of the farmers in your vicinity in regard to the value to them of the daily weather forecasts, as printed in the daily papers?" Most of the correspondents express an appreciation of the weather forecasts, as printed in the daily papers. It is true, however, that, owing to distance from a post-office, many farmers are unable to reap the full benefits of these forecasts. Some farmers condemn them because of alleged inaccuracy, forgetting that they are made for a section of country and not for a single locality. Many farmers, on the other hand, especially at critical periods, place great reliance upon them, and when they open their morning paper look first to see what is said of the probable weather. Charles L. Flint, the long time honored secretary of this Board, wrote in 1854 ("Agriculture of Massachusetts," 1854, Pt. I., p. 29): "From the nature of his occupation, the farmer, like the sailor, must direct his course somewhat by his judgment of the future. Indeed, so many of the daily operations of the farm are dependent on the state of the weather, that he is of necessity

a meteorologist. Meteorology promises some happy results for agriculture hereafter."

The seventh question asked was, "Would farmers be benefited by these forecasts and frost warnings if they were received from twelve to twenty-four hours in advance?" The correspondents are practically unanimous in answering yes to this question. A few state that they do not think anything would be gained, and some fear that the accuracy of the forecasts would suffer if made so long in advance. The thing needed is to make the forecasts accurate, if possible, and get them before the farmers seasonably. An experiment is now being tried in Maine with a system of signals using balls instead of flags, and it is hoped that the results will be gratifying. The following article, prepared for us by the Director of the New England Weather Service, will give an idea of what is needed and what the weather people are trying to do: —

Weather Signal Display in the Agricultural Districts.

With the transfer of the Weather Bureau to the Department of Agriculture, which took place last year, the express purpose of Congress was to extend the benefits of the Weather Bureau more completely into the agricultural sections. The advantages derived from the Bureau are many and so well established that it is not necessary to enumerate them here. One of the most important is the daily weather forecasts, which are now made from twenty-eight to thirty-six hours in advance. Many methods are used to put these before the public at the earliest possible time. No newspaper is now complete without its "weather indications," and the corner where they may be found is one of the first places scanned when the morning paper is picked up; but, while the newspaper is a very good medium for disseminating the information in the towns and villages, it unfortunately does not reach a majority of the farmers with sufficient promptness to be of material advantage to them, especially during the crop season.

Other methods must be employed to reach them, and the Bureau has been telegraphing the forecasts direct to any town or farming section wherever the information is desired,

and where it will be given to the public either by the display of flags or by blowing mill whistles or other similar methods. This offer has been taken advantage of by about twenty-one towns or villages in Massachusetts, and the flags are being displayed or whistles blown in those places at the present time. In some cases the display is made by telephone companies, and the directions are kindly sent over their wires to other villages and to patrons.

The flags for the display are five in number, and cost about \$7. They can be had of any dealer in such materials, and should not be less than six feet square. Two forecasts are issued, either of which, as they may choose, can be had by villages or associations. The P.M. forecasts are made from the 8 P.M. observations, and are received by the displayman as soon as the local office is open in the morning; these cover the probable weather until midnight. The A.M. forecasts are made from the 8 A.M. observations, and are received by the displayman about noon. These cover the weather until 8 P.M. the following day. The latter are generally considered to be of the greatest advantage, because, from the display which is thus made during the afternoon, the farmer is enabled to lay plans for the next day's work. Arrangements have been made by which the early afternoon trains on the Old Colony Railroad are to carry the forecasts to all the stations along their line, there to be posted in conspicuous places. Other roads are considering the matter, and if it is generally done those living near the stations can easily get the information, and if each of the towns will provide themselves with the flags and make arrangements to have them displayed, many others living farther away from the station can see them.

But, after all this is done, there will still be a large number who will never see the forecasts, and it is this class that the Bureau wishes to reach through the different agricultural institutions. The importance of taking advantage of the offer of the Bureau to telegraph the forecasts at government expense is urged upon every agricultural society, grange and farmers' club.

The Southern New England Telephone Company is giving the P.M. forecasts to all its local offices, and all connections

can get them from that company without charge. They have even promised to have the flags displayed wherever they have a local office, if the flags and pole are provided by the people. This is a step that other telephone exchanges should consider, and which the public in general will not be slow to appreciate.

Letters of inquiry directed to J. Warren Smith, Director New England Weather Service, Post-office Building, Boston, will receive attention.

NAILS FOR MARKING TREES FOR PRESERVATION.

In order to get an idea of the extent of the interest taken by the several towns in the recent law providing for the marking of trees for preservation, and also to call attention to this law, the following question was asked, "Has your town taken advantage of the law providing for the supplying of nails for marking trees for preservation?" The intent of this question was to bring the provisions of the law to the attention of the readers of this bulletin. Chapter 196 of the Acts of 1890, as amended by chapter 49, Acts of 1891, and chapter 147, Acts of 1892, is an act relative to preserving ornamental and shade trees on the highways. By this act the mayors and aldermen of the cities and the selectmen of towns are authorized to designate and preserve trees within the limits of the highways for the purposes of ornament and shade, by driving into the same, on the side toward the centre of the highway, a nail or spike with a head with the letter M plainly impressed upon it; said nails or spikes to be procured and furnished by the secretary of the State Board of Agriculture to said mayor and aldermen and selectmen, as required by them for the purposes of the act. Suitable nails, of three sizes, $2\frac{1}{4}$, $2\frac{3}{4}$, $3\frac{1}{4}$ inches in length, have been procured, and to date have been furnished, upon request, to nineteen towns.

NOTES OF CORRESPONDENTS.

(Returned to us May 28.)

BERKSHIRE COUNTY.

Sandisfield (GEO. A. SHEPARD). — Few if any of our farmers take the daily papers, so they have no very decided views as to the value of the weather forecasts they contain. One trouble about taking a daily paper is that many of our farmers do not get their mail more than twice, and some not more than once, a week. The prospect for grass was never better.

Egremont (J. H. ROWLEY). — The views of farmers in this vicinity are favorable to the weather forecasts, as printed in the daily papers. The average farmer becomes more and more interested as he becomes educated in these weather reports. If they could be received from twelve to twenty-four hours in advance, they would be of great value. The season is about one week later than last year, the cold weather having retarded vegetation.

Becket (WM. H. SNOW). — The weather forecasts printed in the daily papers are looked after with interest by our farmers. If these forecasts and frost warnings were received twelve to twenty-four hours in advance, they would be beneficial in many cases, as small crops might be saved.

Dalton (W. B. BARTON). — A few farmers prize the weather forecasts in the daily papers highly. I believe farmers would be benefited by forecasts and frost warnings if they could be received from twelve to twenty-four hours in advance. The spring has been late and cold. Early corn has rotted badly and potatoes are slow in coming up. Apple trees are blooming out fairly well, and the hay crop looks well.

Cheshire (L. J. NORMAN). — The present season is not as forward as last, but promises to be as favorable to the farmer. The tent caterpillar appears to be doing the most damage at present, and no measures are being taken to prevent its ravages. It is very difficult to obtain first-class help on the farm. Good help would demand \$30 per month and board.

Williamstown (S. A. HICKOX). — The spring came in cold and dry, and vegetation came along but slowly until May came with rains. Grass never looked better here at this season of the year. Planting is late, on account of the wet weather. It is difficult to get first-class farm help.

FRANKLIN COUNTY.

Charlemont (H. S. GILES). — April was cool and dry. Some mornings in May the ground has been frozen, and about the 20th snow fell on the hills a number of inches in depth. There has been plenty of rain in the last two weeks, and it has been unfavorable for planting or for seeds which were already planted in moist ground.

Buckland (J. D. AVERY). — Much corn is still unplanted, and a large amount must be replanted in consequence of cold and excessively wet weather. Few of our farmers take the daily papers, but I think those who do consider the weather forecasts valuable. It is exceedingly difficult to get first-class help, and to such \$20 to \$25 per month is paid.

Conway (J. C. NEWHALL). — May has been cold and windy, and very many have not planted their corn. Potatoes planted early are hardly up yet. Tobacco plants not under glass are very late. Grass is looking well. Tent caterpillars are hatching out very thick. Have not seen anyone trying to destroy them, except by picking off the nests by hand. Very difficult to get first-class help at any price. We are away from the railroad and it is late before the mails arrive, so that the farmers do not get the news until near night. For this reason the daily weather forecasts are not especially valuable.

Sunderland (W. L. WARNER). — Everything being so late, it is very difficult at the present time to form any opinion as to the true prospects of the farmers. Grass is looking finely. Tobacco plants are late and small. Apple trees blossomed fully. Onions are looking fairly well.

Montague (C. S. RAYMOND). — There is no first-class help to be had. Polanders get \$10 with board. April and the first part of May was dry, and the latter part of May excessively wet. I think the cool, wet weather has caused corn to rot in the ground to some extent. A little corn was planted very early and came up before the bad weather. Some potatoes are up and looking finely. Grass and fruit promise abundant crops.

Orange (ANSEL HARRINGTON). — Those who receive the daily papers consider the weather forecasts they contain to be of great

value. I think the farmers would be very much benefited could they receive the weather forecasts and frost warnings from twelve to twenty-four hours in advance. Snow fell May 20, and heavy rains for three days after. The wet weather still continues, delaying farm operations, especially on wet land.

HAMPSHIRE COUNTY.

Belchertown (H. C. WEST). — The currant worm and tent caterpillar are doing the most harm of any insects. The former is being treated with an application of hellebore and ashes, the latter by burning, rubbing, etc. The farmers in this vicinity would doubtless be benefited to some extent if they could receive the weather forecasts and frost warnings from twelve to twenty-four hours in advance, but not so much as if we raised garden truck. Mowings and pastures, and also rye and oats, are looking finely. It is a little wet and cold for planting.

Amherst (H. A. PARSONS). — The tent caterpillar is doing the most damage of any insect, but it is slight as yet. Some burn them with a torch, but the best way is to take them in the early morning when they are all in the nest and crush them. We have had an abundance of rain and cool weather for the past two weeks. Grass and grains are looking finely. Potatoes came up slowly. Corn is mostly planted and some pieces are up. Onions came unevenly; some pieces are well stocked, while others are a partial failure, probably owing to poor seed.

Hadley (H. C. RUSSELL). — The season is very backward, on account of cold weather. April was very dry. There was more rain the last part of May, but it was too cold to push vegetable growth. The tent caterpillar bids fair to trouble us more than last year; nothing is done to destroy them. We have to depend upon foreign help more and more each year, native-born laborers engaging in other pursuits more to their liking. Our objection to the weather forecasts is that in districts remote from the large towns the news is not likely to be received soon enough to be of much value.

Chesterfield (HORATIO BISBEE). — The season is backward, and planting not done yet. Grass has wintered well, although it has not made much growth in the pastures. Cows have needed their daily rations of hay up to the present time. Help is scarce and high.

Southampton (C. B. LYMAN). — The present season is not quite so early as last year, but things are coming forward finely now. Not many insects have been observed yet. First-class help is scarce at \$1.50 per day without board, and \$20 to \$25 per month with.

HAMPDEN COUNTY.

Holyoke (JOHN C. THORPE). — The moist weather of late has brought grass forward, and it looks well. All fruit trees have blossomed well. The area of corn has increased, and that of potatoes is about the same as usual.

Westfield (C. F. FOWLER). — Crops are not so far advanced as last year. The season promises to be a favorable one. First-class help is very scarce, at \$35 to \$45 per month. The weather forecasts in the daily papers are closely scanned and highly prized. The receiving of the weather forecasts and frost warnings in advance would greatly benefit the farmers, and they would soon become a necessity.

Blanford (E. W. BOISE). — The farmers consider the forecasts in the daily papers as very valuable if they could be received before noon. If the bulletins could be posted in the post-office it would aid all. The scant supply of hay, and cold, backward spring, has caused many to turn stock out on nearly bare pastures. Planting is very late, on account of wet soil. Oxen have sold fairly well the past spring, but there has been no sale for cows. The acreage of crops will be greater than usual this spring.

Agawam (R. DEWITT). — Large numbers of tent caterpillars, the advance guard of the potato beetle, and some cut worms, have appeared. Farmers are careless about the worms' nests, leaving them until the trees are about eaten up. Corn is coming up well. It might be a help to receive the weather forecasts twelve hours in advance, but the farther off the less reliable.

Wilbraham (H. M. BLISS). — The season is about ten days later than last year. Should the rains continue, grass and grain crops will be good. Farmers are a week behind in their planting. More corn is being planted than usual, and less potatoes.

Brimfield (S. W. BROWN). — The season is backward. Not one-half the corn planted yet. Ground very wet. Prospect of a good grass crop. Apple trees blossomed quite full. No insects but the tent caterpillars, which as a rule we look after closely. All our farmers look for the daily weather forecasts, and depend on them. Difficult to get first-class help; wages \$20 and upward.

WORCESTER COUNTY.

Southbridge (GEO. L. CLEMENCE). — Season from ten to fifteen days later than last year. The tent caterpillar is doing the most damage of any insect, but I think they are not as numerous as usual. First-class help difficult to obtain; some farmers who do not board their help pay \$40 per month. We have had weather-

service signal flags displayed from one of our public buildings since April 15, and appreciate it very much.

Warren (WM. E. PATRICK). — Grass being our main crop, I think the season will be a favorable one for the farmer. From my own observations I think the weather forecasts as printed in the daily papers are of very little value, but have not heard others express themselves in regard to the matter. If these weather forecasts and frost warnings could be received from twelve to twenty-four hours in advance, the farmers would be greatly benefited. It was very dry through April, so that grass started late as well as everything else. Unless we have warmer weather soon, haying and hoeing will come together this year.

Spencer (H. H. KINGSBURY). — Season unusually favorable for team work. Apple trees are now in bloom, and, except on Baldwins, is an average bloom. Feed in pastures short and scanty. Little hay left, and many have been buying the past two months. Prospect is good for a large hay crop. Scarcely any corn planted. Oats and barley looking well. Potatoes coming along slowly. Forecasts received at 7 A.M. would govern the day's work, and be of as much value as those received the evening before.

Dana (E. A. ALBEE). — Season about two weeks later than last. Tent caterpillars are not very plenty, and are generally cleaned out of orchards but not by roadsides. Difficult to get first-class help; wages about \$20 per month. Farmers would be benefited by forecasts and frost warnings if received in advance; also, if the weather signals could be displayed on the railroad trains, it would help very much.

Templeton (LUCIEN GOVE). — Beef, veal, cows and dairy products are low. No great benefits are derived from the weather forecasts, as printed in the daily papers; the cost and time of going to the post-office offsets the good. Snow went off early. April was very dry, with only two light rains and the prevailing wind from the north. Within two weeks there has been plenty of rain. Fields are looking well, but pastures are short. A full bloom of apples, pears and plums. Peaches bloomed unusually full. Stock low, dairy products the same. Hay scarce and high. Planting delayed by rain.

Fitchburg (DR. JABEZ FISHER). — April was much less rainy, but May more so, than in 1891. Season six to ten days later than last year, though but very little behind the average. Tent caterpillars are plenty, and are let alone as much as usual. There are fewer insects as yet than usual. A few think the weather forecasts in the daily papers very valuable, but more are inclined to sneer at the failures. Farmers would be much benefited if they could

be received twelve to twenty-four hours in advance, especially in spring and fall and to some extent at other times. The full apple bloom occurred May 25; average for thirty-six years, the 23d; earliest, May 10, 1889; latest, June 5, 1882.

Leominster (W. B. HOSMER). — The prospect in April was that we should have our planting done early, but the heavy rains of this month have delayed it. They have, however, improved our grass crop, and the indications are for a large crop. Farmers are providing themselves with spraying tools, which leaves but little chance for injury from insects. Were it not for negligent farmers, insects would do but little injury to our crops. I think farmers are putting more thought to the weather forecasts in the daily papers, and consider them valuable.

Holden (G. S. GRAHAM). — The farmer rarely sees the daily paper until evening, if at all, and the weather forecasts do him little good. If they could be received from twelve to twenty-four hours in advance, they would no doubt be of value. If our railroads would indicate the probabilities by whistles, I think it would be a good thing.

Worcester (H. R. KINNEY). — It has been so cold and wet of late that insects have not appeared as abundantly as usual. I think a weather forecast such as the "Boston Herald" prints is a benefit to every one. If the daily papers of the State would give up a little more space each day to the weather forecast, and a little less to baseball, I think farmers and some others would be just as well off.

Grafton (S. E. STOWE). — Excellent outlook for the hay crop. Extra fruit bloom. Planting well along. Farmers value the daily weather forecasts highly, and oftentimes a paper is taken for that alone. The law giving the right to telegraph companies to run their lines on country roads and town ways is detrimental to the farmers in preserving the shade trees and keeping the roadside neat and tidy. The breeding place for tent caterpillars is the public highway.

MIDDLESEX COUNTY.

Sherborn (N. B. DOUGLAS). — Season backward. Large amount of corn not yet planted. Twice as much corn will be planted as last year. Feed in pastures short, and hay all gone. More oats and peas sowed than usual. Winter rye a good crop. Apples, cherries and peaches a full bloom. Pear blooms enough for a good crop. Raspberries winter-killed. Strawberries looking well.

Weston (H. L. BROWN). — Some think the weather forecasts printed in the daily papers are of great value, while others think

they are not correct enough to be of value. Corn is coming up slowly, and some of it poorly. Potatoes are a week or ten days behind, but coming all right. Most vegetables are about the same time behind last season. Grass looks finely.

Hudson (GEO. A. COTTING). — The apple trees are now white with blossoms. The season is cold and backward, which is favorable for a heavy crop of apples.

Concord (WM. H. HUNT). — The asparagus beetle is about, but not as abundant as in some years. April was very dry, and the latter part of May has been very wet and cold. Some early planted corn has to be replanted. There is a full fruit blow. Experienced farm hands are getting a little more pay than last year.

Groton (DANIEL NEEDHAM). — This is a very remarkable season. April gave us only eight one-hundredths of an inch of rain; May has given a little in excess of four inches. The ground is now full of water, and grass and all fruit trees, excepting pears, promise an abundant harvest. Hay is very scarce; our farmers sold at low prices last fall, thinking there would never be any more high prices for hay; but they now see their mistake. Our farmers think well of the weather forecasts.

Billerica (J. N. PARDEE). — Fruit trees blossomed unusually full. Grass is growing rapidly. Early potatoes and peas are looking well. Corn planted May 7 on early land is not up yet. Have seen some fields planted earlier, well up, but looking rather yellow. Tent caterpillars were numerous, but the storm of the 20th and 21st nearly destroyed them. Good help is hard to get, at \$20 per month with board. May was cold and wet, but, the ground being saturated and the springs full, a few warm days will cause a boom.

ESSEX COUNTY.

Groveland (ABEL STICKNEY). — Tent caterpillars are not very plenty, especially where they were kept back last year. Our farmers regard the weather forecasts printed in the daily papers as quite valuable, but yet are not willing to wait for results. The season is such that our hoed crops are not all in yet. Fruit never blossomed better; the bloom of apple, peach and cherry was great, that of pear and plum more than an average.

South Byfield (GEO. W. ADAMS). — The season is later and dryer than last year. With the exception of grass, the outlook is favorable. The tent caterpillar is doing the most damage of any insect. A few spray them, or use a brush. Our farmers make little use of the weather forecasts, as printed in the daily papers.

They would be valuable if received from twelve to twenty-four hours in advance, providing they were equally reliable.

Marblehead (W. S. PHILLIPS, Jr.). — The weather forecasts in the daily papers are eagerly looked for, and the prophet ridiculed when he does not predict rightly. The farmers would be very much benefited could they receive them from twelve to twenty-four hours in advance. The backward spring has helped the indolent farmer. Many of those who planted very early cannot show better crops than the easier brother who put his work in two or three weeks later.

West Boxford (J. W. CHADWICK). — The tent caterpillar is doing the most damage of any insect. The method used to check them is hand picking in the early morning. Our farmers think the weather forecasts in the daily papers of great value, and go almost entirely by them. The apple and peach trees have had the fullest bloom for many years.

Danvers (C. H. PRESTON). — The tent caterpillar is doing the most damage of any insect. Some spray them, others brush them down, more do nothing. The weather forecasts in the daily papers are of little value, because not received early enough. Farmers would be benefited by such forecasts and frost warnings could they be received from twelve to twenty-four hours in advance.

NORFOLK COUNTY.

Cohasset (E. E. ELLMS). — The tent caterpillar is making great ravages on the apple trees, and wild cherry trees are completely stripped of their foliage. No measures are being taken to exterminate them. First-class farm help very difficult to get.

Medfield (GEO. R. CHASE). — Season more backward than last. Of the insects the tent caterpillar is doing the most damage. A few fight and destroy them, but half at least of the farmers let them alone even in orchards, to say nothing of roadside trees. Every man ought to be compelled by law to destroy them on his own trees, while roadside trees might be treated at public expense, where there was no immediate interested owner.

Norfolk (J. W. HINKLEY). — The asparagus beetle and tent caterpillar are doing the most damage of any insects. The caterpillar is being burned and picked. I think picking them by hand the surest and best way. Do not think farmers would be especially benefited by weather forecasts and frost warnings. Having had a bright, dry April, and a wet May, the hay crop promises to be a good one. Rains in May have retarded planting to some extent.

BRISTOL COUNTY.

Attleborough (ISAAC ALGER).—The outlook this season is much better than last. Grass and strawberries are looking finely. There is nothing like a home and family to make a hired man what he should be. What can you expect of a man who is hired for three or four months? He knows that he is hired to bridge over some hard job, and therefore has no interest in the work. Let those men who are always complaining about their help build a cottage house, put a young man and his wife into it, hire him by the year and treat him kindly, and you will not hear much more from them about poor help.

Mansfield (D. E. HARDING).—Farm help is scarce, at about \$20 per month. The cranberry growers would undoubtedly be benefited by daily weather forecasts and frost warnings. Our hay crop looks unusually well, but other crops have not come forward enough so that it is safe to predict what they will be.

Raynham (N. W. SHAW).—Farmers would be most decidedly benefited if the weather forecasts and frost warnings could be received twelve to twenty-four hours in advance. The morning paper is not often read until night; what the next day will be is what is wanted. We have had but little warm weather. The ground being so cold, seeds do not come up well, and those that do make little progress.

Dighton (A. W. PAUL).—There are very few tent caterpillars. An insect new to me has appeared on our strawberries. It looks somewhat like the spindle worm on corn, and bores downward in the crown of the plant, killing the fruit-stalk. On one acre of mine there are thousands upon thousands, and I fear the result.

Somerset (JOSEPH GIBBS).—The season is very backward, as compared with last. Much early planted seed has failed to germinate. Good help getting \$1.50 per day or \$25 per month. Most of the farmers do not place much confidence in the daily weather reports. They would be benefited if the reports could be relied upon, but they are so incorrect that they are entirely useless.

Dartmouth (L. T. DAVIS).—Should think the farmers might be benefited by weather forecasts and frost warnings if they were carried far enough into the country towns. The month of May has been very wet, and has delayed planting and injured some pieces of early planted crops. Grass is looking well and making good growth. Fruit blossomed fairly.

PLYMOUTH COUNTY.

West Bridgewater (F. E. HOWARD).—The present season is about an average. Grass is looking better than last year, and I think we shall have a larger crop. Most of our farmers think well of the weather forecasts in the daily papers. If these forecasts and frost warnings could be received from twelve to twenty-four hours in advance, they would be of value, especially in haying time and the strawberry and cranberry seasons. Tent caterpillars have made their appearance. We use kerosene on them to some extent.

Kingston (JAS. H. CUSHMAN).—The tent caterpillar is the only insect to do any damage, and it is not very plenty as yet. First-class help is very scarce; few if any will hire by the month. A great many consider the weather forecasts in the daily papers of great value.

Marshfield (GEO. J. PETERSON).—It is difficult to get first-class help at \$25 per month. The cranberry growers are interested in the weather forecasts, and the strawberry crop might often be saved with precaution. Grass on the uplands is the best-looking crop at this date. Much of the corn remains unplanted, and the season is regarded hereabouts as phenomenal. Planting on low ground has resulted in loss of seed. The grass on the dyked land is looking finely.

Halifax (G. W. HAYWARD).—It has been very cold this spring. It is very late, delaying the planting of corn. Potatoes are planted, but it is so wet that those on low ground are liable to rot. All crops are backward, with the exception of grass, which bids fair to be heavy if we do not have a drouth.

BARNSTABLE COUNTY.

Eastham (J. A. CLARK).—Cut worms are doing the asparagus more or less damage. Fruit trees appear to be freer from worms than usual. Supply of help is equal to the demand, at \$1.50 per day and \$20 per month with board. Asparagus has not done as well as last season, and prices have been somewhat lower.

West Barnstable (JOHN BURSLEY).—The tent caterpillar upon the trees and the fire worm on the cranberry bogs are doing the most harm of any insects. The caterpillars are being burned and gathered, and the cranberry bogs sprayed with Paris green or tobacco solutions. The month of May has been wet, and planting on clayey soils has been delayed.

Sandwich (J. R. HOLWAY).—Fire worms are plenty on the cranberry bogs, and Paris green and tobacco solutions are being

used on many bogs. Help is hired mostly by the day, and is scarce at from \$1.50 to \$1.75 per day. The season has been cold and backward.

East Dennis (JOSHUA CROWELL). — The season is about ten days late. Insects are not as plenty as usual, perhaps owing to the lateness of the season. The potato beetle is beginning to appear, and also the cranberry vine worm. First-class help is scarce, at about \$25 per month. The weather forecasts printed in the daily papers reach us rather late. If weather forecasts and frost warnings could be received from twelve to twenty-four hours in advance, they would benefit our farmers.

DUKES COUNTY.

West Tisbury (WM. J. ROTCH) — The present season is somewhat backward. First-class help is scarce. Our farmers employ many Portuguese, many of whom are fair help, at from \$10 to \$15 per month, always with board. Farmers in this vicinity do not regard the weather forecasts, as printed in the daily papers, as especially valuable to them.

NANTUCKET COUNTY.

Nantucket (CHAS. W. GARDNER). — The present season is a month later than last year, on account of cold rains. Potato bugs are doing the most damage of any insect. Picking by hand is the principal measure resorted to to check them. The farmers in this vicinity think the weather forecasts in the daily papers are just right. It is very hard to get decent help.

MASSACHUSETTS
CROP REPORT

FOR THE

MONTH OF JUNE, 1892.

ISSUED BY

WM. R. SESSIONS,
SECRETARY STATE BOARD OF AGRICULTURE.

BOSTON:

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1892.

CROP REPORT FOR THE MONTH OF JUNE, 1892.

OFFICE STATE BOARD OF AGRICULTURE,
BOSTON, MASS., July 1, 1892.

Bulletin No. 2, Crop Report for the month of June, is herewith presented. The issuing of weekly crop reports in co-operation with the New England Weather Service has been commenced, and it is hoped that they are being well received. Particular attention is called to the article on frost warnings in this bulletin.

PROGRESS OF THE SEASON.

Report No. 96 (June, 1892) of the Statistician of the United States Department of Agriculture states that the returns of June indicate the seeding of about the same area of wheat as that of 1891. The returns of the condition of winter wheat make a percentage of 88.3, an advance from 84 last month. Some States report no improvement, others a slight betterment, and a few indicate a marked advance. The preliminary report of acreage of oats makes about the same breadth as last year, the State percentages consolidated making an average for the whole of 99.1. The condition of the crop is considerably below the average of June returns for a series of years, but is three points above the report at the same date last year. The general average is 88.5.

The first return of acreage of rye shows a breadth very slightly smaller than last year. The return of condition makes the general average 91.0, or the lowest reported since 1887, and with two exceptions the lowest since 1879.

The breadth of barley shows an increase of 2.3 per cent over that harvested last year. The general average condition is 92.1.

The total breadth of clover varies little from that of last year. The condition of the crop is comparatively high, the general average standing at 94.9.

The early spring was not generally favorable for grass, the May condition for pasture averaging only 87.5. The

past month has brought more suitable conditions, and the average has advanced to 95.9.

The June report on apples, the first of the season, shows generally high condition in most of the States of large production. The bloom was reported quite full in almost all districts, but there was a failure to set in many sections. In Massachusetts and Rhode Island the prospect on June 1 is reported as approaching perfection.

The first report shows rather poor conditions of the peach crop, especially in States of commercial production, with the exception of Michigan. Late frost, cool weather and driving rains are generally responsible for the low condition.

Returns of correspondents report cotton planting late, germination retarded by low temperature, and slow development of the plant. The reduction of the area from floods resulting from river overflows, especially of the Mississippi and its tributaries, has been heavy.

In Massachusetts the acreage of rye as compared with last year is represented by 99, and its average condition June 1 by 90; the acreage of barley compared with last year by 100, and its average condition June 1 by 95; the acreage of oats as compared with last year by 100, and its average condition June 1 by 94; the acreage of clover as compared with last year by 100, and its average condition June 1 by 99; the average condition of spring pasture June 1 by 91; the average condition of apples June 1 by 100; and the average condition of peaches June 1 by 95.

INDIAN CORN.

The returns of correspondents indicate an increased acreage of Indian corn in the counties of Worcester, Middlesex and Norfolk. In the remaining counties the acreage appears to be an average. Corn is backward, but is of good color and growing well. Nearly all the correspondents report that the crop promises well at this date. The Nantucket correspondent reports sweet corn to be rotting badly. Several correspondents report an increased acreage of sweet corn.

THE HAY CROP.

On account of wet, cloudy weather since June 22 haying has been delayed and considerable cut grass damaged. Many

correspondents report that haying has not generally been commenced. It is thought that the crop as a whole will not be an unusually large one. There are many complaints of grass being light, especially on old fields. A correspondent in Franklin County reports old mowings as badly winter-killed. The spittle insect has done much damage in Worcester County; it appears to be established there, as there is but one complaint from other counties. A correspondent in Dudley writes: "The spittle insect threatens to become a serious pest in our meadows. Fields which but for the ravages of this insect would yield from one to one and one-half tons per acre will not afford one-half of this quantity." A correspondent in Holden writes: "Many fields of grass are actually white with the spittle insect."

EARLY POTATOES.

The acreage of early potatoes appears to be about that of last year, although correspondents report both a larger and a smaller area. The condition is generally reported as good, and the crop promises well. A few report potato tops as uneven, and that the yield promises to be less than last year. Potato bugs appear to be unusually prevalent, but are kept within bounds by the use of Paris green.

DAIRY PRODUCTS.

There appears to be little change in the quantity of dairy products, as compared with previous years. If there is a change in prices received it is for the better, as correspondents do not report a decrease. Fourteen returns were received from Franklin County; twelve returned the quantity as average, one as less than average and one as more than average. All returned prices as average, or same as last year. Twenty-six returns were received from Worcester County; nineteen returned the quantity as average, two as less than average and five as more than average. Nineteen returned prices as average and seven as increased.

PASTURAGE.

Most of the correspondents report pastures as being in good, very good or excellent condition. The recent rains have helped them very much.

SMALL FRUITS.

There is a very general complaint of raspberry canes having been winter-killed, and the crop will be light. Generally the strawberry crop has been a good one. The correspondent in Dighton reports strawberries the most disastrous failure in twenty years, while in the neighboring town of Swanzey the crop is reported as heavy, but prices low, and in Somerset the crop is reported as an average one. Currants, blackberries, grapes, peaches and apples promise to be good crops. Cherry crop not very good. Pears do not promise well.

OTHER CROPS.

Rye is reported as looking well in Dalton, Charlemont, Southampton, Deerfield, Ludlow, Monson and Belchertown. Oats are reported as looking well in Dalton, Rowe, Deerfield, Ludlow, North Brookfield and Harvard. Oats are reported as rusting in Southampton, Ludlow and Belchertown. Barley coming along fast in Monson. Tobacco setting is completed, and the crop has started well; the acreage is considerably above the average. From Arlington comes the report, cabbages, beets and cucumbers look well, onion crop very large, celery late.

INSECTS.

Potato bugs are generally prevalent. Rose bugs are more numerous and doing more damage than usual, especially in Worcester and Middlesex counties. The spittle insect is common in Worcester County. Scattering reports of canker worms, asparagus beetles, cut worms, tent caterpillars, currant worms, striped squash bugs, cabbage worms, codling moths and fire worms have been received.

TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

[FROM UNITED STATES WEATHER-CROP BULLETINS]

Ten days ending June 6. — Warmer than usual to the eastward of the Mississippi valley, except along the south Atlantic coast, where it was slightly cooler than usual. The weather was colder than usual from the Mississippi valley westward to the Pacific coast. The rainfall for the period from May 28 to June 6 was generally in excess of the aver-

age in the Lake region, the Ohio, central Mississippi and lower Missouri valleys.

Week ending June 13. — Over the greater portion of the principal agricultural districts of the country the week has been warmer than usual. The seasonal temperature continues deficient over nearly the whole of the United States. The rainfall of the past week has been less than usual over much of the greater part of the United States. The seasonal rainfall, from March 1 to date, is below the average in New England and from the south Atlantic coast westward to New Mexico, but elsewhere it has generally exceeded the average.

Week ending June 20. — The weather during the past week has been especially favorable for growing crops over the greater portion of the country east of the Rocky Mountains. It has been warmer than usual generally throughout the Northern States east of the Mississippi and over the Southern States. The rainfall for the past week has been less than usual over the greater portion of the Southern, Middle and New England States. It was generally in excess over the upper Lake region and portions of the adjoining States. About 75 per cent of the normal rainfall has occurred in northern New England, while in southern New England it is slightly below the normal.

Week ending June 27. — Week warmer than usual from the central Mississippi valley eastward to the Atlantic coast. It was also warmer than usual over the southern Rocky Mountain regions and on the north Pacific coast. It was cooler than usual in the Lake region and thence westward to the Rocky Mountain region. The season continues late generally throughout all agricultural districts. During the past week the rainfall has been in excess over the southern half of the Gulf States and over the greater part of the south Atlantic States. Heavy rains also occurred over New England and thence westward over the Lake region.

NEW ENGLAND WEATHER AND CROPS.

[FROM UNITED STATES WEATHER-CROP BULLETINS]

Ten days ending June 6. — Precipitation below, except above in extreme northern portion; temperature above and

sunshine normal. Best week of season; few seeds rotted by past cold and heavy rains, but generally they are starting quickly; grass crop promises well.

Week ending June 13. — Temperature and sunshine above and precipitation below average. Continued favorable weather, and crops booming; slight damage from frost in central districts on the 11th; grass very good, except light in central and southern New Hampshire and Vermont.

Week ending June 20. — Temperature and sunshine above and precipitation below average, except heavy local storms in northern sections, where damage was done by wind, hail and lightning. Crop conditions favorable; tobacco setting well along; cranberries promise well.

Week ending June 27. — Temperature and precipitation above and sunshine below average. Heavy local showers have washed roads and crops badly in northern portion; drought broken; grass much improved, but light on old fields.

MASSACHUSETTS WEATHER.

Meteorological Data for June, 1892.

[Furnished by New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. No. of Days.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Cloudy.	Partly Cloudy.	Cloudless.
Adams, . . .	67.2	91	14	45	11	-	8	S. E.	11	-	-
Springfield, .	71.5	95	14	50	11	4.43	14	S.	7	18	5
Amherst, . . .	69.2	94	14	40	11	3.04	13	S.	13	-	-
Turner's Falls, .	69.7	94	14	47	11	3.17	13	S.	16	9	5
Fitchburg,* . .	68.9	92	13, 14	50	10	2.78	13	W.	16	3	11
Worcester, . .	70.4	93	14	47	11	2.22	13	S. S. W.	6	24	0
Dudley, . . .	64.9	91	14, 15	47	25	2.07	12	S. W.	13	11	6
Framingham, .	69.8	96	14	38	11	2.75	11	-	-	-	-
Concord, . . .	69.0	94	13, 14	39	11	4.08	12	S. W.	18	10	2
Lowell, . . .	70.2	97	14	40	11	4.44	12	S. S. W.	7	19	4
Boston, . . .	69.6	96	14	49	11	3.05	10	S. W.	13	10	7
Taunton, . . .	69.3	96	13, 14	38	11	3.09	9	S. W.	13	9	8
New Bedford, .	66.8	89	13, 14	38	11	3.29	11	-	-	-	-
Hyannis,* . . .	68.8	91	22	45	11	1.50	7	-	9	9	12
Provincetown, .	74.8	89	22	43	11	2.07	9	S. W.	-	-	-

* Data from thermometer not self-registering.

Summary.

Temperature (F.). — Monthly mean, 69.3° ; highest monthly mean, 74.8° at Provincetown; lowest monthly mean, 64.9° at Dudley; maximum, 97° at Lowell on the 14th; minimum, 38° at Framingham, Taunton and New Bedford on the 11th; range, 59° ; greatest local monthly range, 58° at Taunton; least local monthly range, 45° at Springfield; greatest daily range, 39° at Framingham on the 12th; least daily range, 4° at Boston on the 4th.

Average temperature for June at Springfield for twenty-five years, 68.7° ; average for June, 1892, 71.7° ; departure, $+3.0^{\circ}$. Average temperature for June at Boston for twenty-two years, 66.0° ; average for June, 1892, 69.6° ; departure, $+3.6^{\circ}$.

Precipitation. — Average, 3.00 inches; greatest, 4.44 at Lowell; least, 1.50 at Hyannis. Average for June at Springfield for forty-five years, 3.80; for June, 1892, 4.43; departure, $+0.63$. Average for June at Boston for twenty-two years, 3.27; for June, 1892, 3.05; departure, -0.22 .

Prevailing wind. — Southwest.

Thunder-storms. — 2d, 6th, 9th, 14th, 16th, 17th, 23d, 25th, 29th, 30th.

Aurora. — 2d; seen at few stations.

REMARKS.

The weather for Massachusetts for the month of June, 1892, was characterized by a very high mean temperature, with great variability, especially during the middle of the month; heavy local storms accompanied by thunder and lightning, high winds and hail prevailing southerly winds and an excess of rainy days.

The mean temperature was from 1° to over 3° above the average throughout the State. The lowest occurred on the morning of the 11th, when considerable damage was done in the eastern districts by frost; some garden vegetables were injured in the north-east and some cranberry bogs were badly damaged on the Cape. The observer at Hyannis reports that leaves on brush back from the shore turned black as in winter; other reports from the cranberry district

show that the damage was local and confined to small limits. From the 11th to the 14th there were very strong ranges of temperature with steadily increasing heat each day, until on the latter date it rose to 90° and over, at all stations except at some of those very near the coast; thus the range for the month was unusually large.

The precipitation was about one inch below the normal on the southern coast, but considerably above the average in the northern and western districts. The greater part of the precipitation in the latter sections came in heavy local showers, when some damage was done by the heavy downpour of rain washing crops and roads, and also by high wind, lightning and hail. The heaviest hailstorm occurred on the 14th and did the most damage in the upper Connecticut Valley at Greenfield; thousands of dollars of damage was done to windows, and in other towns farther east much glass was broken.

The season is about up to the average with hoed crops, but the continued rains and cloudy weather during the last part of the month have delayed haying. The observer at Fitchburg reports that "a certain stage of the Concord grape occurred on the 27th, one day later than in 1891, but six days earlier than the average for thirty-five years."

July Weather.

We compile the following from the records at the Boston station for twenty-one years: the mean or normal temperature is 72° . The warmest July was that of 1872 with an average of 75° , and the coldest 1884 with an average of 68° . The highest temperature during any July was 101° on the 10th in 1880. The lowest temperature occurred on the 22d in 1874; it was 46° .

The average precipitation for the month of July is 3.58 inches, and the average number of rainy days 11. The greatest precipitation fell in 1880, — 6.86 inches; the least in 1885, — 1.44 inches. The greatest amount recorded in any twenty-four consecutive hours was 2.38 inches on July 30–31, 1876.

FROST WARNINGS.

The following is clipped from a recent number of the "American Cultivator":—

"The practical application of the work of the Weather Bureau of the Department of Agriculture, by farmers themselves, is being more and more apparent. Just after one of the cold waves which passed over the South not long ago, the following telegraphic despatch appeared in a Memphis (Tenn.) paper, telling of the frost in Mississippi: 'No damage resulted to tomato plants, as growers were warned by cannon firing on receipt of the Weather Bureau report. Prospects are still good for over two thousand acres in at this point.' Being warned a full day ahead of the coming freeze, the truckers had time to protect their crops."

The methods employed for protecting crops from frosts are various and are generally well known. Small gardens or fields can be covered by cloths, newspapers, etc.; large cranberry bogs, if properly constructed, can be flooded, and others not provided with the reservoir for flooding are many times saved by building fires or smudges on the windward side of the bog if it is not too large, and if very large several fires in the middle.

The use of the smudges is well known among the tobacco growers in New England and Kentucky, as well as in the great wheat fields in the northwest and to the orange growers of Florida. In the latter district large stove-like arrangements are used, in which tar is burned; this causes a thick smoke, which effectually protects all parts of the groves which it reaches or covers. In Germany a compound of tar and sawdust is used for the same purpose. Generally in our own sections brush fires are used, and are constructed so as to cause as thick a smoke as possible. Being placed, as we have said, on the windward side of the field, the smoke drifts slowly over the plants, either close to the ground or some distance up in the air, and just as surely protects them from the frost as though they were covered by a cloth.

We do not know whether this process is in use among the grape growers or the truck gardeners, but see no reason why it will not work perfectly well with them. In most

cases the material is prepared beforehand, and then on a cold night the temperature is closely watched. If it is found to be getting dangerously low, the fires are lighted and the danger averted.

In many cases, if the knowledge could be had early in the morning or even at noon time of a frost during the coming night, a large part of the crops could be gathered or provisions made for artificially covering them. But from local observations it is impossible to tell until night draws near, and in most cases not until morning comes and the damage is done do we feel sure of a frost; no action is taken, because we are loath to gather unripe products, although they would have been much more valuable if gathered and out of the way of the frost.

The Weather Bureau has been making a special study of this matter, and they are now telegraphing warnings of impending frosts from twelve to thirty-six hours in advance to any section where they are desired and where public interests will be benefited. Tobacco and cranberry growers are particularly interested in the warnings, but they undoubtedly benefit truckmen, owners of vineyards, and growers of both large and small fruits. So arrangements have been made for telegraphing these warnings during the coming season, at government expense, wherever the information is desired and will be used.

The most common method of disseminating the information after it is received is by flying a large white flag with black centre from a prominent flagstaff. But such methods as blowing whistles, ringing bells, and, as mentioned in the above extract, firing cannons, are in general use. The last-named method seems very good, because on a fairly quiet day or afternoon (and it is only on such afternoons that we usually fear a frost) a good cannon can be heard for many miles in all directions.

By addressing the director of the New England Weather Service, Boston, Mass., full information will be given and immediate action taken to have the warnings sent.

NOTES OF CORRESPONDENTS.

(Returned to us June 30.)

BERKSHIRE COUNTY.

Sandisfield (GEO. A. SHEPARD). — Potato bugs, striped squash bugs and cut worms are doing the most damage. Corn stands well, but some pieces have been damaged by cut worms. Haying progresses slowly because of rains; crop good. Acreage of early potatoes about an average; prospect for a good crop. The quantity of dairy products is little in excess of several previous years and price about average. Pasturage never better. Small fruits like blackberries, raspberries and huckleberries grow here spontaneously, and quantities picked by children find a home market. Blackberries and huckleberries especially abundant; though wild, they cannot be surpassed for quality.

Sheffield (DWIGHT ANDREWS). — Rose bugs on cherry trees, and potato bugs, are doing the most damage. Indian corn looking finely; acreage a full average. Prospect for a good hay crop. Dairy products average. Pasturage good. Small fruits good average crops.

Lee (A. BRADLEY). — No insects except potato bugs. Indian corn is looking very well. No hay cut yet; crop good except on old meadows. Potatoes not quite up to the average. Dairy products increasing in quantity; prices same as last year. Pasturage good. General outlook for farmers good. Crops fully up to the average.

Dalton (W. B. BARTON). — Indian corn is looking well; full acreage. Full average acreage of early potatoes, and they are looking well. Butter and milk selling for good prices, and more than usual being produced. Cherries a total failure; strawberries have done well and raspberries promise well. Haying has commenced, but proceeds slowly on account of showery weather. Apples have set well and promise a fair crop. Oats and rye look well. Pastures are good and cows look well.

Windsor (H. A. FORD). — Tent caterpillars are doing the most damage. Indian corn looks well; acreage equal to previous years. No grass cut yet; good crop expected. Acreage of early pota-

toes equal to previous years; promise a full average crop. Dairy products very nearly an average in quantity and price. Pasturage good. Outlook for strawberries good.

Cheshire (L. J. NORTHUP). — Potato and rose bugs are doing the most damage. Indian corn is looking fairly well; acreage about as usual. Haying not commenced yet; prospect good. Early potatoes promise to be a full crop. Dairy products to date are less in quantity, but prices are well sustained. Cheese sells for more than formerly. Pasturage extra good. Strawberries abundant.

FRANKLIN COUNTY

Monroe (D. H. SHERMAN). — Potato bugs doing the most damage. Indian corn looking very well. But little haying done yet. Old mowings badly winter-killed; less than an average crop. Potatoes are looking well, but late. Quantity of dairy products below average; prices fully up to an average. Pasturage very good. Strawberries very plenty; blackberries blossomed well and all wild berries promise well.

Charlemont (H. S. GILES). — Potato bugs and striped squash bugs doing the most damage. Indian corn is growing rapidly now, but the general outlook is not up to previous years. Early potatoes about an average acreage and promise a full average crop. Dairy products about as in previous years. Pasturage very good. Raspberries have winter-killed badly. Strawberries plenty with an excellent growth. The hay crop not an average; well-cultivated fields will be good, while the poorly cultivated will be thin and short. Rye is an excellent growth. The general outlook is quite favorable.

Colrain (A. A. SMITH). — Indian corn looks finely; acreage about as in previous years. Haying progressing poorly; about a two-thirds crop. Acreage of early potatoes a full average; crop promises well. Dairy products about as in previous years. Pasturage never better. Strawberries a bountiful crop and other fruits about as usual.

Conway (J. C. NEWHALL). — Tent caterpillars are very plenty, and there is hardly a tree but has a number of nests. Corn backward, but is coming along very fast now. There will be considerable hay cut by the first of July; the crop will not be as large as usual. Not nearly as many early potatoes planted as last year, and they are not quite up to last year's appearance. Dairy products about as last year. Raspberries almost a total failure. Strawberries a good crop.

Whately (FRANK DICKINSON). — Potato bugs are our only insect pest. Indian corn late and small, but coming on very fast;

acreage about seventy-five per cent of former years. Haying hardly begun; prospect of a large crop. Acreage of early potatoes less than last year; promise of a full crop. Quantity of dairy products average; active and strong, at about former prices. Pastures have been very dry, but late rains are helping them very much. Raspberries and blackberries are looking finely. Strawberries an average, and in their prime.

Northfield (CHAS. POMEROY). — Potato bugs doing most damage. Indian corn looking finely, color good; a week later than usual. Haying just commenced; crop about an average. Acreage of early potatoes fully as large as in previous years; looking well. Dairy products a full quantity; price about the same. Pasturage fair. Strawberries a full average; prospect for blackberries and blueberries good.

HAMPSHIRE COUNTY.

Greenwich (WM. S. DOUGLAS). — Rose bugs on grape vines, and potato bugs, are doing the most damage. Indian corn is looking well. Prospect for a fine hay crop. Acreage of early potatoes about an average. Dairy products are good, both in quantity and price. Pasturage fair. Dry weather hurt small fruits.

Belchertown (H. C. WEST). — Potato beetle doing the most damage. Indian corn looking well; acreage ten per cent greater than in previous years. Grass still growing; few have commenced cutting. Acreage of early potatoes a full average; late rains have pushed the crop, and they are now looking finely. Dairying is on the increase. Pasturage has been a little short, but is now improving. Strawberries fair, and prospect for cherries, currants and blackberries good. Rye is remarkably fine. Oats are rusting to some extent.

Hadley (L. W. WEST). — Potato bugs and wire worms doing the most damage. Indian corn looking well; acreage about an average. Haying not commenced; prospect better than last year. Acreage of early potatoes about an average; do not promise a full crop; very uneven. Dairy products about the same as last year. Pasturage average. Strawberries yield an average; price low.

South Hadley Falls (H. W. GAYLORD). — Potato bugs are doing the most damage, although they are well under control by the growers. Indian corn looking well; ten to fifteen per cent larger acreage. No grass cut, because of bad weather; crop better than last year. Acreage of early potatoes twenty per cent larger, because the up-river farmers are all growing tobacco; crop

promises well. Dairy products above the average in quantity, quality and price. Individual dairies getting a higher price than for three years. Pasturage above the average. Strawberries the best crop we ever had. All other fruits promise well.

Southampton (C. B. LYMAN).—The potato beetle is very active, and the cut worm takes his full share of tobacco. Indian corn is looking well; acreage fully an average. Haying progressing slowly; crop a full average. Full acreage of early potatoes; crop promises well. Think the quantity of dairy products increases yearly; prices a little better than average. Pasturage good. Outlook for small fruits not as good as the average year. More tobacco set than last year, and coming forward finely. Rye never looked better. Have one fine piece of oats, and another badly affected with rust.

HAMPDEN COUNTY.

Blandford (E. W. BOISE).—Cut worms unusually plentiful. Indian corn very backward; stands fairly well except where destroyed by crows, which have been unusually troublesome. Acreage ten per cent in advance of former years. Acreage of early potatoes about an average; crop late. Pastures have been short. Prices for butter two to four cents per pound better than for previous years. The season is unusually backward. The grass crop is backward in growth. On rich and new seeded lands a low average crop is expected; on out-lands very light.

Russell (ROLAND PARKS).—Potato bugs are doing the most damage. Indian corn presents an average appearance; acreage an average. Haying progressing fairly; light crop. Not an average acreage of early potatoes; crop does not promise well. Pasturage not as good as usual. Strawberries poor in yield and quality. Season backward. Apples a total failure.

West Springfield (N. T. SMITH).—Cut worms, cabbage maggots, currant worms and potato bugs are doing faithful work. Indian corn is of good color with even stand, but is small for this date; acreage about the same as last year. Few have begun haying. Recent seeding on good lands a fine crop; old lands light, but may improve with present rains. Acreage of early potatoes less than the past two years; now in blossom with full stand. Dairy products full average quantity, with price about as last year. Springfield Co-operative Milk Association paying about one-fourth cent per quart more than last year. Pasturage in good average condition. Strawberries below the average.

Chicopee (R. W. BEMIS).—Potato bugs are more numerous than usual, and rose bugs are eating the grapes badly. Indian

corn looking quite well ; fair acreage. Haying progressing slowly, on account of wet weather ; fair crop. Early potatoes are an average in acreage, and look well. More dairy products and lower prices than in previous years. Pasturage good. Strawberries and cherries a fair crop.

WORCESTER COUNTY.

West Brookfield (L. H. CHAMBERLAIN). — Indian corn looking finely ; acreage increased. No haying done yet ; full crop expected. Acreage of early potatoes increased one-third ; condition good. Dairy products increased in quantity and price. Pasturage good. All crops are growing rapidly. There is no blight or rust, and insects are doing but little damage.

Petersham (S. B. COOK). — Tent caterpillars, cut worms and potato beetles doing the most damage. Indian corn looking very well ; acreage one-third greater than last year. Haying not commenced ; crop average. Acreage of early potatoes about as in previous years ; promise of an average crop. Quantity of dairy products about as in previous years ; prices average a little better. Pastures in fair condition. Strawberries are our only small fruit ; they promise well. Crows have been very troublesome in the corn fields.

Westminster (JOSEPH HAGER). — Potato bugs are unusually plenty. Indian corn is looking well, and the acreage is a full average. No haying done ; crop light as yet. Acreage of early potatoes an average, and crop promises well. Dairy products about as in previous years. Pasturage damaged by drought. Small fruits got a very promising start, but the drought has injured strawberries. Blueberries and blackberries promise abundant crops. Apples promise unusually well, but the pear crop will be small.

Fitchburg (Dr. JABEZ FISHER). — Rose bugs more abundant than for some years. Other insects less than usual. Fair hay crop in prospect, but bad weather for harvesting. Pasturage very good. Strawberries not abundant, and prices low. Other berries promising. Grapes look very well.

Harvard (PRESTON KNIGHT). — Spittle insect working the grass very much. Indian corn looks very well ; acreage an eighth larger than formerly. Haying is progressing slowly ; weather not favorable. Grass on old fields very light ; on new fields, good. Acreage of early potatoes fully up to the average, and prospect for a good crop. Quantity of dairy products has increased ; price same as last year with the surplus out, but a few routes get the full price. Pasturage fair ; grass thin, but grows fast. Rasp-

berries small crop, blackberries fair, and strawberries a good crop but nearly gone. Oat crop looking well.

Rutland (A. L. MILES). — Wire worms, thrips and tent caterpillars doing the most damage. Indian corn looking well, though late; acreage rather larger than last year. Very little haying done yet; crop fully as light as last year. Acreage of early potatoes about an average; crop promises very well. Dairy products about as in previous years. Pasturage very good. A large amount of fodder and ensilage corn has been planted, and silos are very popular.

Worcester (H. R. KINNEY). — Potato bugs and rose bugs are doing the most damage. Indian corn looks well; acreage rather above the average. Haying progressing slowly; crop will probably be light. Full average acreage of early potatoes, but they are rather backward. Pasturage very good. Strawberries are looking very well, but raspberries look badly. Blackberries and grapes are in good condition. During the past two weeks crops have grown fast.

Oxford (D. M. HOWE). — The potato beetle is doing the most damage. Indian corn fully up to the average. New hay fields good; old ones light. Early potatoes fully up to an average. Nearly all farmers have their strawberry patch and many have raspberries, blackberries, currants, etc. They are waking up, it seems to me.

Douglas (T. M. POTTER). — Rose bugs and potato bugs are doing the most damage. Indian corn is looking very well; should think a larger acreage than last year. Hay crop very little better than last year. Early potatoes compare favorably with previous years, and promise a full average crop. Pasturage good. Strawberries are our only small fruit, and are a good crop. Dairy products fully an average.

Blackstone (L. R. DANIELS). — The tent caterpillars' work is the most apparent of any insect. Indian corn looking very well; acreage of field corn increasing, that of sweet corn about as usual. Haying progressing very slowly. Acreage of early potatoes fully equal to previous years, with promise of a full crop. Dairy products of small farms smaller in quantity; that of creameries increasing; prices about as usual. Pasturage very good. Small fruits sell at low prices.

MIDDLESEX COUNTY.

Ashland (A. R. STEVENS). — Indian corn rather backward, but thrifty; acreage larger than last year. Very little haying has been done; crop will be very good. Acreage of early potatoes

less than in previous years; crop promises to be a full average. Pasturage very good. Outlook for small fruits very poor. There will be some apples, but hardly any pears.

Marlborough (E. D. HOWE).—The potato beetle, tent caterpillar and canker worm are doing the most damage. Indian corn begins to look well; acreage about an average. Haying well begun; crop good. No material change in acreage of early potatoes; promise of a full average crop. Pasturage good. Strawberries ninety-five per cent of full crop; red raspberries badly winter-killed; blackberries a full crop.

Arlington (W. W. RAWSON).—Good crop of hay. Pasturage good. Large blossom on small fruits, and we expect a large crop. Cabbages are looking well, also beets and cucumbers. Onion crop is very large. Celery is late.

Concord (WM. H. HUNT).—Rose bugs, asparagus beetle and potato bugs doing the most damage. Indian corn is looking well, but a little late. Acreage of early potatoes a little less than usual; crop promises well. The year is an average one for dairy products. Pasturage good. Strawberry beds that have been run two years are light; new ones doing well. Raspberry canes were quite generally killed in the winter, so that the crop will be very light. During twenty years of grape growing I have not had such numbers of rose bugs to contend with as this year. Rains have been abundant, and all crops are looking well.

Westford (ARTHUR WRIGHT).—Rose bugs are working badly on grapes and roses. Haying just commencing; crop good. Dairy products about an average in quantity. Price of milk the same, butter a little better. Pasturage good. Strawberries have suffered from blight in some instances, but on the whole are a fair crop. Blackberries are looking well, and promise a fine crop.

Lowell (C. L. MARSHALL).—Potato bugs, asparagus beetle and rose bugs are doing the most damage. Indian corn is looking well; acreage about an average. Haying has commenced; crop light. About an average acreage of early potatoes; crop promises well. Dairy products about an average in quantity; price increased. Pasturage very good. Strawberries and blackberries good, but raspberries a light crop, being winter-killed.

ESSEX COUNTY.

Haverhill (EBENEZER WEBSTER).—Rose bugs, striped squash bugs and potato bugs are doing the most damage. Acreage of Indian corn rather larger than usual, and crop rather backward but of good color. Haying has not begun. Early potatoes promise well; acreage about the same. Same prices for milk

as last year. Pasturage good. Strawberries and currants good ; raspberries winter-killed somewhat.

Groveland (ABEL STICKNEY). — We have rose bugs, potato bugs and a few canker worms. Indian corn looking quite well, but a little late ; acreage about as usual. Good prospect for the hay crop. Prospect of an average crop of early potatoes. No change in price of milk, which is our main dairy product. Pastures naturally poor, but good feed thus far. Strawberries injured by rain, cherries good, currants look well, raspberries and blackberries a good set, pasture blueberries promise well.

Newbury (GEO. W. ADAMS). — Canker worms and potato bugs are doing the most damage. Indian corn is looking well ; acreage average. Not much grass cut as yet ; small crop. Perhaps a little less acreage of early potatoes ; crop looks well, but is a little later than usual. Dairy products about the same in quantity ; price average. Pasturage extra. Strawberries are a small crop. Other fruits about an average.

Topsfield (B. P. PIKE). — Canker worms and potato bugs are as plentiful as usual. Indian corn looking well ; acreage the same as last year. Average hay crop. More early potatoes planted than usual, and looking well. Late potatoes not looking as well. Milk about the same as in previous years ; butter a little higher. Pasturage good. Blackberries look well.

Danvers (C. H. PRESTON). — Potato beetles and currant worms doing most damage. Indian corn looking well ; acreage average. Haying delayed by bad weather ; crop below average. Acreage of early potatoes rather greater than usual ; promise well now. Dairy products about as usual. Pasturage good. Strawberries are yielding very well. Blackberries and currants promise well. Raspberries badly winter-killed, and there will be no crop.

NORFOLK COUNTY.

Weymouth (H. W. DYER). — Indian corn is looking finely ; acreage much larger than in previous years. Prospect for a good hay crop. On dry land the crop of early potatoes is good. Dairy products about the same as in previous years. Pasturage good. Large crop of strawberries and cherries. The weather has been favorable for almost all crops, except on wet land.

Melfield (G. R. CHASE). — Rose bugs are doing the most damage, but are rather on the wane. Indian corn in excellent condition ; one-fourth larger acreage. Haying just commenced ; generally a little better crop than last year. Slight increase in acreage of early potatoes ; tops looking well. Quantity of dairy products about the same as last year. Prices early in June a little firmer

than last year, but weakening. Pasturage excellent. Strawberry vines seldom looked better, but the fruit ripens slowly and the yield is disappointing. Much more sweet corn is planted this year than usual, both to mature and for fodder.

Medway (MONROE MORSE). — Rose bugs and potato bugs are doing the most damage. Indian corn is looking well; think there is some increase in acreage. Very little grass cut; crop estimated as eighty per cent of a full crop. Potatoes looking well; acreage about an average. Think the dairy yield less than in the years 1890 and 1891. Pastures in very fair condition. Strawberry crop limited; raspberries nearly all winter-killed; currants and blackberries good.

Franklin (C. M. ALLEN). — Rose bugs are doing the most damage. Indian corn backward, but coming on very fast; acreage larger than usual. But little hay cut; promises a full average crop. Dairy products a full average. Strawberries good; blackberries fine; raspberries badly winter-killed; currants, a smaller crop than usual, but very large. Less acreage of early potatoes; backward and slim.

BRISTOL COUNTY.

Mansfield (D. E. HARDING). — Indian corn looking fairly well; acreage varies but little from other seasons. Bad weather keeps haying back; crop better than the average. Early potatoes promise a good crop; acreage not as large as last year. Pears light; strawberries abundant, and other small fruits a fair average. On the whole, it seems to be more than an average season, and our farmers express themselves as well satisfied with the outlook.

Attleborough (ISAAC ALGER). — Indian corn excellent; acreage same as last year. No mowing done yet; prospect for hay crop good. Average acreage of early potatoes, and promise of a full average crop. Pasturage good. Strawberries have not come up to early expectations. On the whole, the outlook is very promising. Frequent showers have kept the ground in good condition for plant growth.

Berkley (R. H. BABBITT). — Potato bugs and rose bugs are doing the most damage. Indian corn is looking well, with about the same acreage as last year. Haying just commenced, with the prospect of a fair crop. Acreage of early potatoes smaller than in previous years; crop looking well. Dairy products about as last year. Pasturage very good. Strawberries, our principal small fruit crop, have been a failure so far as profit goes, because of dry weather in early part of June. Late berries very abundant.

Somerset (JOSEPH GIBBS). — Orchards are being injured by canker worms. Corn promises a full crop; acreage one-tenth

larger than in previous years. Hay will not be more than seventy-five per cent of a full crop. Early potatoes promise a full crop; acreage one-tenth more than last season. Pasturage good. Strawberries are extensively grown in this vicinity, and the crop will be an average one. The market is over-supplied, prices rule low, and there will be small margins for the growers. The business is being overdone.

Dartmouth (L. T. DAVIS).—Potato bugs are doing the most damage. Indian corn is looking quite well, but is rather small. Haying scarcely begun; crop about an average. Early potatoes looking very well; acreage average. Pasturage fair. Strawberries medium crop; currants below average; cherries poor. The weather has been quite favorable for most crops.

PLYMOUTH COUNTY.

West Bridgewater (F. E. HOWARD).—Potato bugs are doing the most damage. Indian corn looks finely; acreage compares favorably with previous years. Haying is late, but the prospect is favorable for a good crop. Acreage of early potatoes compares well with previous years, and promises a full average crop. Butter is lower; milk about the same as in previous years. Pasturage good. Strawberries plenty and low in price; currants, cherries and huckleberries not plenty.

Hanson (Dr. F. S. THOMAS).—Indian corn looking first rate, acreage about an average. Haying is progressing slowly, because of dull, rainy weather. Acreage of early potatoes about an average and promise a full average crop. Dairy products about as in previous years. Pasturage very good. Strawberries good. For several years we have had many tent caterpillars. This year I have not seen a fully developed nest, web or tent; have seen perhaps six half-formed or very small ones.

Marshfield (GEO. J. PETERSON).—Potato beetles are very numerous. Indian corn is looking well; acreage less than usual. More sweet corn along the shore. Much hay is yet uncut, and considerable which has been cut is damaged. Potatoes look finely, and promise a good crop; acreage larger than in former years. Pasturage good. Strawberries have been abundant, and of good quality. Currants begin to show well, and the prospect is good for berries of all kinds. The plentiful rains lead farmers to expect good crops on the uplands.

Wareham (A. SAVARY).—Cut worms doing most damage. Indian corn looking very well; acreage average. Haying just begun; large crop of good quality. Acreage of early potatoes about an average, and the crop looks well. Dairy products about as in previous years. Pasturage very good.

BARNSTABLE COUNTY.

Falmouth (D. R. WICKS). — Potato bugs are doing the most damage; so much wet weather that Paris green has little effect. Indian corn never looked better, and is growing fast; acreage about the same as last year. Haying began about June 20, but wet weather stopped the cutting; crop good. Acreage of early potatoes about the same as last year; promise more than a full crop. Pasturage never looked better. Strawberries a fair crop; red raspberries will be a light crop.

Barnstable (JOHN BURSLEY). — Fire worms on cranberry vines and rose bugs on grape vines are doing the most damage. Indian corn a little late, but looks well; acreage an average one. Haying progressing slowly, because of poor weather; about a two-thirds crop. Early potatoes an average acreage; looking well. Pasturage good. Strawberries nearly all marketed. Cranberries have suffered somewhat from frost and fireworms.

Dennis (JOSHUA CROWELL). — The potato beetle is doing the most damage. Indian corn looking well, although somewhat late; acreage about as last year. Haying has commenced, but the weather is unfavorable; crop promises more than an average. Acreage of early potatoes about an average; crop promises to be an average one. Dairy products about an average. Pasturage very good. Strawberries very good. The season has been cold and backward, with sufficient moisture for all crops.

DUKES COUNTY.

West Tisbury (WM. J. ROTCH). — Potato bugs are doing the most damage. Indian corn rather backward; acreage not over eighty per cent of previous years. Haying not yet begun, but a large crop is assured. Full acreage of early potatoes, with prospect of a good crop. Very little change in quantity and price of dairy products. Pasturage excellent. Strawberry crop is large and of good quality.

NANTUCKET COUNTY.

Nantucket (C. W. GARDNER). — Rose bugs and potato bugs are doing the most damage. Field corn looking finely; sweet corn badly rotted. Grass on new lands is looking finely; on old lands, not so heavy. Acreage of early potatoes about an average; crop looks very well at present. Dairy products about an average in quantity and price. The cranberry crop is not so good or so forward as usual, on account of wet weather and extreme heat.

MASSACHUSETTS
CROP REPORT

FOR THE

MONTH OF JULY, 1892.

ISSUED BY

WM. R. SESSIONS,
SECRETARY STATE BOARD OF AGRICULTURE.

BOSTON:

WRIGHT & POTTER PRINTING CO., STATE PRINTERS,
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1892.

CROP REPORT FOR THE MONTH OF JULY, 1892.

OFFICE STATE BOARD OF AGRICULTURE,
BOSTON, MASS., Aug. 1, 1892.

PROGRESS OF THE SEASON IN GENERAL.

Report No. 97 (July, 1892) of the Statistician of the United States Department of Agriculture states the acreage of corn, as compared with the actual area of last year, to be 95.6 per cent. The reduction of area has mainly been confined to the great corn-producing regions of the Ohio, Upper Mississippi and Missouri valleys. In these districts the falling off is much heavier than the general average above given, the loss here having been in a measure offset by an increased acreage in the Atlantic States, and in the South, districts in which corn is not a prominent crop. The condition of the crop is returned at 81.1. This is the lowest July average ever reported by this Department. The poor condition is the result of excessive rainfall, which delayed planting, prevented proper cultivation and resulted in floods and overflows over large areas of bottom lands.

The condition of winter wheat is reported at 89.6, against 88.3 on June 1. Spring wheat declined during the month from 92.3 on June 1 to 90.9 on July 1. The condition of oats, which was reported very low, 88.5, in June, has been further reduced during the past month, and the present return, 87.2, is the lowest July condition, with one exception, ever reported, being generally the result of an unfavorable season for seeding and too much rain during the period of growth. The month shows slight improvement in rye, the average advancing to 92.8. The condition of barley has changed but little during the month; but the average, 92.0, is the highest reported in July of any year since 1885.

The acreage of potatoes is returned at 94.2 per cent of the large area of last year. In the South, where the breadth

of cotton has been shortened, a considerable increase in the area devoted to this crop has been made; but in the New England and Western States, where the largest yield is obtained and the bulk of the crop is grown, there is a considerable decrease. The condition of this crop is almost invariably high in July, as the vicissitudes incident to its growth are met with later. The present return, 90.0, is low. The lowest ever before reported for July was in 1890, when it stood at 91.7.

The aggregate acreage of tobacco is smaller than last year, the present returns showing 97.3 per cent of that area. The returns indicate a decided revival in tobacco planting in the Connecticut valley. Massachusetts shows 119 per cent and Connecticut 110 per cent. The indicated condition of the crop is rather high, standing at 92.7, a figure better than the July return of recent years.

The wet season, which has proved unfavorable for most of the arable crops, has been especially favorable for the different grasses. The condition of clover is high, and the average now stands at 95.5. The general average of timothy is 96.8, an unusually high return. The condition of pastures has improved during the past thirty days and the general average is 98.4.

The July returns show the prospect for all kinds of fruit generally very poor. The best reports are from the States of the Rocky Mountain region and from the Pacific coast.

The returns for cotton make an average condition for the whole belt of 86.9. The June return was 85.9.

TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

FROM UNITED STATES WEATHER-CROP BULLETINS.

Week ending July 4. — Week cooler than usual throughout the districts east of the Rocky Mountains. On the Pacific coast a slight excess in temperature. The season continues late throughout the whole country. There has been more than the usual amount of rain in the States on the Atlantic coast, except Florida, and in the lower Lake region, Michigan, Illinois, and from Minnesota southward to Louisiana. No rain occurred on the Pacific coast, except in two small districts.

Week ending July 11. — Week cooler than usual in all agricultural districts except in the northern portion of the spring-wheat regions of Minnesota and the Dakotas, but the weather has been especially favorable for harvest work throughout the central valleys. The season is from one to three weeks late in all districts except New England and the middle Atlantic States, where about the normal condition has prevailed. The rainfall the past week has been largely in excess throughout the greater portion of the south Atlantic and Gulf States. Only light showers occurred in the Northern States, and over the greater portion of the Lake region and Minnesota there was a total absence of rain.

Week ending July 18. — Week cooler than usual throughout all agricultural districts. At this date (18th) the seasonal temperature is deficient over the entire country, except at a few stations in the Lake region and on the Atlantic coast, where it is about normal. Rainfall in excess on south Atlantic coast, Mississippi valley and from Minnesota westward to the Pacific coast. The seasonal rainfall, from March 1 to date, is generally up to, or in excess of, the average over nearly the whole country.

Week ending July 25. — Week unusually warm in all sections east of the Rocky Mountains, except along the immediate Atlantic and Gulf coasts. On the Pacific coast the daily temperature was from 3° to 6° lower than usual. The week closed with the warmest weather of the season over the principal agricultural districts east of the Mississippi. The week was unusually dry over the greater portion of the central valleys and Southern States, while in the east Gulf States and along the Atlantic coast south of New York the precipitation was generally in excess. Limited areas of excessive precipitation, due to local showers, are also reported.

NEW ENGLAND WEATHER AND CROPS.

FROM UNITED STATES WEATHER-CROP BULLETINS.

Week ending July 4. — Precipitation above, temperature normal, and sunshine below. Heavy local rains in north portion washed roads; grass and grain lodged; corn and potatoes on low lands slightly injured; oats rusting badly in south portion; haying delayed; sunshine needed.

Week ending July 11. — Temperature and precipitation below and sunshine above average. Slight damage by frost in north on 4th and 5th; rye harvest begun, crop excellent; tobacco and cranberries doing well; corn backward but good color; wild fruits abundant.

Week ending July 18. — Temperature and sunshine above and precipitation below average except in southern Connecticut valley and north-western Vermont; slight frost in north on 17th, but little damage; haying being pushed and average crop; apples dropping badly; peaches below average.

Week ending July 25. — Temperature and sunshine excessive; precipitation deficient; rain badly needed, especially in south; potatoes probably most injured; the bulk of hay crop secured in most excellent condition; rye good and mostly harvested.

MASSACHUSETTS CROPS.

Report No. 97 (July, 1892) of the Statistician of the United States Department of Agriculture gives the following for acreage and condition of crops July 1, 1892: acreage of corn compared with last year, 101; average condition of corn, 94; average condition of wheat, 99; average condition of rye, 93; average condition of oats, 97; average condition of barley, 93; acreage of potatoes compared with last year, 99; average condition of potatoes, 99; acreage of beans compared with last year, 94; average condition, 97; acreage of tobacco compared with last year, 119; average condition of tobacco, 95; average condition of clover, 98; average condition of timothy, 98; average condition of pasture, 99; average condition of apples, 92; average condition of peaches, 90; average condition of grapes, 96.

The Hay Crop.

This important crop has been very generally secured, and while probably only an average in quantity, the quality, as a rule, is excellent. It has been a very good season for securing the crop, and but little has been injured by rain, and that at the beginning. On account of the drought it is feared that the second crop will be small, though with favorable weather it may be an average.

Potatoes.

The yield of early potatoes, where dug, has been light, and a number of correspondents, particularly in the south-east portion of the State, refer to it as being very light. From the returns it would seem that \$1 per bushel has been the average price received, the range being from 60 cents to \$2. Dry weather has greatly injured late potatoes, especially on high lands, and the indications point to a material shortening of the crop.

Apples.

Quite general complaint is made of apples dropping from the trees. The bloom was good and many apples set, but dry weather, the codling moth and other causes have greatly lessened the number. No doubt those maturing will be all the better for the wholesale thinning, but judging from returns of correspondents the crop as a whole promises to be a light one. However, under such circumstances, we often have a much larger crop than is prophesied.

Pasturage.

Up to the middle of July pastures were in excellent condition, but the drought greatly injured them, and many correspondents report them as being dried up, and that it has been necessary to feed in the barn. It is thought that the cool, wet weather since the 28th will make them good again.

Other Crops.

Rye has been a very good crop and harvested in good condition. Small fruits have been greatly shortened in yield by the drought. Tobacco is doing well, though somewhat uneven on account of the dry set. Corn is growing well, though pieces on dry land in some sections have rolled badly. Cranberries have also suffered severely from dry weather. Oats have rusted some, but promise to be a good crop. It will be noticed that most of the correspondents refer to the serious effects of the drought, and no doubt thousands of dollars' worth of damage has been done to growing crops.

It is thought and hoped that the cool, wet weather which has since come will increase the brightness of the outlook for the future.

Insects.

In general, insects have done very little damage to crops during the past month. Correspondents in all the counties refer to the presence of the Colorado potato beetle. Correspondents in Franklin and Worcester counties report grasshoppers as being numerous. Scattering references are also made to the presence of green cabbage worms, canker worms, fall tent caterpillars, asparagus beetles, wire worms, cut worms, fire worms, squash bugs and borers, rose bugs, tobacco worms, currant worms and codling moths.

MASSACHUSETTS WEATHER.

Meteorological Data for July, 1892.

[Furnished by New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. No. of Days.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Cloudy.	Partly Cloudy.	Cloudless.
Adams, .	68.2	90	25, 29	42	2	5.10	7	-	-	-	-
Springfield, .	74.2	95	26, 28	51	17	7.17	10	S.	4	17	10
Turner's Falls, .	70.6	92	28, 29	48	2	4.58	10	S. W.	9	5	17
Royalston,* .	74.6	91	29	58	1, 16	5.00	9	S. W.	-	-	-
Fitchburg,* .	71.0	92	26	56	16	2.94	11	W.	16	5	10
Worcester, .	72.5	95	28	49	17	4.70	11	S. W.	8	22	1
Framingham, .	71.0	95	27	45	17	4.21	9	-	-	-	-
Lowell, .	72.0	97	26	41	9	2.32	6	S. W.	4	23	4
Boston, .	73.0	96	26	54	17	2.56	11	S. W.	3	13	15
Taunton, .	72.1	102	26	45	7	1.38	8	S. W.	9	13	14
New Bedford, .	70.5	92	26, 27	45	7	3.08	9	-	-	-	-
Hyannis,* .	75.4	98	27	54	7	1.24	7	S. W.	4	14	13
Provincetown, .	71.4	94	26	52	7	1.30	6	S. W.	3	14	14

* Data from thermometer not self-registering.

Summary.

Temperature (F.). — Monthly mean, 72°; highest monthly mean, 75.4° at Hyannis; lowest monthly mean, 68.2° at Adams; maximum, 102° at Taunton on the 26th;

minimum, 41° at Adams on the 9th; range, 61° ; greatest local monthly range, 57° at Taunton; least local monthly range, 33° at Royalston; greatest daily range, 37° at Lowell on the 22d; least daily range, 5° at Lowell and Worcester on the 1st. Average temperature for July at Springfield for twenty-five years, 73.2° ; average for July, 1892, 74.2° ; departure, $+1.0^{\circ}$. Average temperature for July at Boston for twenty-two years, 71.1° ; average for July, 1892, 73.0° ; departure, $+1.9^{\circ}$.

Precipitation. — Average, 3.51 inches; greatest, 7.17 at Springfield; least, 1.24 at Hyannis. Average for July at Springfield for forty-five years, 4.56; for July, 1892, 7.17; departure, $+2.61$. Average for July at Boston for twenty-two years, 3.53 inches; for July, 1892, 2.56; departure, -0.97 .

Prevailing Wind. — South-west.

Thunder-storms. — 1st, 3d, 6th, 8th, 13th, 14th, 16th, 22d, 25th, 27th, 28th, 29th.

Meteor. — Fitchburg, 17th, 8 p.m., north-west.

Aurora — 16th (unusually brilliant and beautiful at this season of the year), 20th, 24th, 25th.

REMARKS.

The month of July was characterized by excessive heat, great range in temperature, large amount of sunshine, low humidity, deficiency of clouds and a lack of rainfall.

Unusually low temperatures occurred on the 4th, 6th and 17th; light frosts being reported in some low lands. High temperatures were experienced from the 10th to 15th and from the 22d to 29th; the last period was the hottest spell of weather felt in Massachusetts for several years. At Provincetown on the extreme end of Cape Cod the temperature was the highest on the 26th ever recorded there by the present observer. The heat was tempered along the coast on the 28th and 29th by an east wind, but further inland the heat on these days was intense.

The amount of sunshine recorded at Blue Hill was the largest ever recorded for any month during the seven years of observation. Very little rain fell in any section of the State from the 4th to the 28th, and this, coupled with the

intense heat, caused an unusually sharp though not unusually severe drought. The greatest damage was probably done to potatoes, although grain, garden truck, pastures and newly-mowed fields suffered to considerable extent. The drought ended with heavy thunder-storms on the 28th and 29th in the central and western sections, and a heavy north-east rain on the 31st. This last rain was lightest along the south-east coast, and the total fall for the month there was considerably below the average, but over the central and western districts it was above. At Gilbertville 1.51 inches of rain fell on the 28th, 1.23 on the 29th and 1.20 on the 31st, making a total of 3.94 inches for the last four days of the month. The storm of the 28th was unusually heavy in this section of Massachusetts; near Princeton Centre a woman was killed by lightning; at Fiskdale at 4.15 p.m. a shower from the north met one from the south and 1.58 inches of rain fell in twenty minutes, overflowing gutters and streets; it was accompanied by high winds, doing considerable damage to crops. Half an hour later another shower gave 0.23 inch, and still later 0.33 inch more fell, making a total of 2.14 inches inside of six hours.

AUGUST WEATHER.

We compile the following from the records at the Boston station of the Weather Bureau for twenty-one years: the mean or normal temperature is 68° . The warmest August was that of 1872, with an average of 72° , and the coldest that of 1889 with an average of 67° . The highest temperature during any August was 97° on the 31st in 1881, and the lowest 74° on the 16th and 17th in 1880 and 1885.

The average precipitation is 4.44 inches, and the average number of rainy days 10. The greatest amount of precipitation for any August was 10.68 in 1872, and the least 0.39 in 1883. The greatest amount of rain recorded in any twenty-four consecutive hours was 4.99 inches on the 18th and 19th in 1879. The average number of cloudless days is 11; partly cloudy days, 12, and cloudy days, 8.

NOTES OF CORRESPONDENTS.

(Returned to us July 30.)

BERKSHIRE COUNTY.

Sandisfield (GEO. A. SHEPARD). — Potato bugs are very numerous. Potatoes are looking well, though some pieces are blighted. Hay crop good. Pastures never better at this season of the year. Apples will be scarce, although we anticipated a large crop when they first set.

Egremont (J. H. ROWLEY). — Hay crop one-fourth to one-third less than last year, but of good quality. But few early potatoes dug and the yield has been fair. An average crop of late potatoes is promised. Prospect of a very small crop of apples. Pasturage very good generally. Rye crop better than last year.

Lee (A. BRADLEY). — Hay crop considerably larger than last year, with quality about the same and nearly secured in good condition. Few early potatoes, and selling for \$1 per bushel at wholesale. Late potatoes looking finely. Apples have dropped off largely. Pasturage good. Rye crop better than last year.

Dutton (W. B. BARTON). — Hay has been secured in first-class condition, but is a smaller crop than last year. No rain for twenty days has cut off the yield of early potatoes. Indications good for late potatoes. Apples set well, but have dropped off badly. Pasturage good. A full average crop of rye.

Windsor (H. A. FORD). — An average hay crop of very extra quality. Indications good for late potatoes. Apples dropping and the crop will not be large. Pasturage quite good. We had a very nice rain the 31st, which was a great help to feed in pastures and rowen as well as to crops in general.

Hancock (C. H. WELLS). — A slight increase in quantity of hay over last year, with quality good. Light yield of early potatoes; price about \$1 per bushel. Indications very good for late potatoes. Corn is looking well and growing rapidly. Small apple crop in prospect. Pasturage better than common.

Cheshire (L. J. NORTHUP). — Quantity of hay a trifle less than last year; quality good. Good yield of early potatoes; price about 75 cents per bushel. Apple crop will be small. Pastures are dry and getting very short. Rye crop is large.

Williamstown (S. A. HICKOX). — Hay crop is reported light but of good quality. Early potatoes yield well; price about 75 cents per bushel. Indications good for late potatoes. Apples are dropping from the trees. Pasturage short. Rye is thin, but filled out well. Heavy shower the 29th.

FRANKLIN COUNTY.

Rowe (J. F. BROWN). — Quantity of hay a little less than last year; quality better. Corn is looking well. Small yield of early potatoes, and the indications for late potatoes are poor. Apples will be about an average. Pastures are drying up. Weather the past two weeks very hot and dry.

Charlemont (H. S. GILES). — Hay crop has been secured in very good condition, but the quantity is not as large as last year. Yield of early potatoes very good; price 85 cents per bushel. Indications unfavorable for late potatoes. Rye an excellent crop. Apples a fair crop. Pasturage quite good. Corn, potatoes and tobacco on dry ground are suffering for the want of rain.

Buckland (J. D. AVERY). — Grasshoppers are doing considerable damage. Hay crop about as last year. Late potatoes are looking finely. Apples have fallen off badly, and the crop will be light. Feed is quite short in many pastures. Rye crop about as last year. The drought is beginning to be severely felt.

Ashfield (A. G. HOWES). — Potato bugs are still around, and grasshoppers are reported in some parts of the town. Hay crop not quite up to an average in quantity, but of good average quality. Early potatoes yield well; price \$1 per bushel. Indications for late potatoes not good. Will probably be a fair crop of apples. Pastures are looking fairly well. Rye crop about as last year. Much needed rain came the 28th.

Whately (FRANK DICKINSON). — Hay crop rather below the average in quantity; quality good. Yield of early potatoes rather light, and very few to sell. Late potatoes are looking well, but will hardly be an average crop. Apples will be about two-thirds of a crop. Pastures are dry. Quantity of rye less than last year; quality very good.

Deerfield (CHARLES JONES). — Haying all done, with a good average crop. Corn looks well, and has made rapid growth the past month. Oats are nearly ready to harvest, and are a good crop. Rye a good crop and well secured. Tobacco looks well, but is a little late. Fair yield of early potatoes: price 75 cents to \$1 per bushel. Indications good for late potatoes. Prospect not very good for apple crop. Pastures dry.

Northfield (CHARLES POMEROY). — Quantity of hay three-fourths of last year's crop and quality fully equal. Early potatoes not a full average; price \$1 per bushel. Apples falling off badly. Pastures drying up. All growing crops are suffering for want of rain.

Leverett (W. L. BOUTWELL). — Hay crop equal to last year's and secured in prime condition. Very early potatoes yielded fairly well; price 75 cents to \$1.25 per bushel. It has been too dry for late potatoes. Corn is looking well. Tobacco will be late and uneven, owing to the very dry set. Off year with us for apples. Pastures dry. Rye heads not well filled.

Orange (ANSEL HARRINGTON). — Grasshoppers are very numerous. Hay ten per cent below last year in quantity, but better in quality. Yield of early potatoes rather light. Outlook for late potatoes rather discouraging. Prospect for apple crop very good. Pastures getting very dry and short.

HAMPSHIRE COUNTY.

Enfield (D. O. CHICKERING). — Hay crop about the same as last year. Yield of early potatoes is light. Indications that late potatoes will be a light crop. Prospect of about one-half of an average apple crop. Pastures very short. Rye crop very good. The oat crop is much better than usual.

Belchertown (H. C. WEST). — Hay crop somewhat less than last year, but of fine quality and harvested in excellent condition. Early potatoes \$1 per bushel. Late potatoes are looking well. Apples have fallen from the trees badly. Pastures dry and short, but are not extremely bad. For years we have not had a better season to harvest hay and grain.

Pelham (J. L. BREWER). — All crops are looking quite well. Hay has been secured in good condition, and is a little better crop than last year. Indications good for late potatoes. Prospect of a very light crop of apples. Pastures have suffered from lack of rain. Rye crop better than last year.

Hadley (H. C. RUSSELL). — The hay crop has been secured in good condition, except what was cut early, and the quantity is larger than last year. Not a large yield of early potatoes, but prices are down to 60 cents per bushel. Indications fair for late potatoes. Apples falling off badly. Pastures are suffering from drought. Rye crop about an average.

Southampton (C. B. LYMAN). — Hay crop about an average in quantity and quality never better. Yield of early potatoes light; price about 80 cents per bushel. Indications that the crop of late

potatoes will be small. Prospect of a small apple crop. Pastures are getting short. Rye crop the best for some years. Corn and tobacco are looking well.

Westhampton (W. H. LYMAN). — Hay crop about an average in quantity and quality. Late potatoes promise to be above an average crop. Light crop of apples in prospect. Pasturage fair. Rye a good crop.

Goshen (ALVAN BARRUS). — Hay crop ten per cent below last year in quantity; quality as good, if not better. Hardly half a crop of early potatoes. Apples have fallen off badly and appearances indicate little more than half a crop. Pastures are drying up. Rye crop fully equal to last year's crop. Hardly rain enough the past three weeks to lay the dust.

Worthington (C. K. BREWSTER). — Hay crop about one-fifth short. Early potatoes yielding fairly well, and selling for 80 cents per bushel. Indications fair for late potatoes. Prospect fair for apple crop. Pastures are rather short.

Chesterfield (HORATIO BISBEE). — Quantity of hay less than last year; quality good. Early potatoes are very light. Tops of late potatoes are looking well, but the dry weather must hurt them. Apples have dropped badly. Corn leaves are rolling. Pastures are short. Unless there is rain soon we shall have but little rowen.

HAMPDEN COUNTY.

Russell (ROLAND PARKS). — Hay crop about three-fourths of last year's and of good quality. Fair yield of early potatoes; price \$1 per bushel. Indications for a light crop of late potatoes. Apples a failure. Pastures are poor. Average rye crop. The weather the past ten days has been very hot and dry.

Holyoke (J. C. THORPE). — Hay crop not quite as large as last year but of better quality. Early potatoes a small crop; price 80 cents to \$1 per bushel. Late potatoes promise well. Apples promise a little below an average. Pasturage good until the recent hot weather. Rye crop about the same as last year.

West Springfield (T. A. ROGERS). — All commenced haying late, but have finished on time. The quantity of hay is about the same as last year and the quality better. Yield of early potatoes about an average; price 75 cents per bushel at present. Tops of late potatoes seem to be turning now. Pastures good till quite lately. Rye as good as last year. Corn generally looks well. Some oats have rusted.

Agawam (R. DEWITT). — Hay crop good in quality and larger than last year. Yield of early potatoes not as large as usual;

price 75 cents to \$1 per bushel. Prospect for apples not as good as last year. Pastures hold out well. Rye and oats as good as last year. No cut worms to speak of and not many tobacco worms.

Ludlow (C. B. BENNETT). — Haying is nearly done with and crop about one-third larger than last year; quality fair. Very light yield of early potatoes; price \$1 per bushel. The tops of late potatoes are green yet and the crop promises to be a good one. Prospect of a very light apple crop. Corn has fairly jumped the last ten days and promises well. Rye crop rather better than last year.

Wilbraham (F. E. CLARK). — Most farmers are disappointed in the quantity of their hay crop, but the quality is excellent. Early potatoes three-fourths of an average crop. Late potatoes will be a light crop unless we have rain soon. Early apples perhaps three-fourths of an average; late apples not more than one-fourth of an average. Pasturage good up to within two or three weeks. Rye about an average crop. Oats rusting considerably. Corn is growing fast.

Hamptden (J. N. ISHAM). — Hay crop one-tenth more than last year in quantity, and quality as good as last year. Small yield of early potatoes; price \$1 per bushel. Indications point to a medium crop of late potatoes. Apples will be hardly one-half of last year's crop. Pastures have been good but are getting short. Rye a good crop. Oats showed some rust a month ago but are ripening into a very good crop.

Monson (A. H. WHITE). — It has been a good season for haying, and the crop is larger than last year and of very good quality. Light crop of early potatoes; price 80 cents per bushel. Late potatoes do not seem to be setting at all. Pastures are dry.

WORCESTER COUNTY

Warren (W. E. PATRICK). — Quantity of hay about as last year, but quality much better. A good yield of early potatoes, with price at \$1 per bushel. Late potatoes looking well. The apple crop will be short. Pastures looking fairly well where the land is moist. The rye crop is as good, if not better, than last year.

North Brookfield (J. H. LANE). — Grasshoppers have increased immensely during the hot spell. Hay crop less than last year in quantity but of good quality. Outlook for late potatoes very poor. Apple crop will be very light; practically no pears. Pastures badly pinched by drought. Corn is growing well.

Hardwick (WM. A. WARNER). — Hay crop less than last year in quantity, but of better quality. Small yield of early potatoes;

price \$1 to \$1.10 per bushel. Promise of a small crop of late potatoes, and of a light crop of apples. Pastures have dried up. Rye crop better than last year.

Barre (J. L. SMITH). — Three-fourths of a hay crop; quality extra good. Indications for late potatoes good if we have plenty of rain. Prospect of a very light crop of apples. Pastures quite short.

Petersham (S. B. COOK). — Hay about secured in excellent condition, and with less work in handling than usual. Early potatoes yielded well; price \$1 to \$1.25 per bushel. Growth of late potatoes affected by drought. Apples are dropping off badly. Pastures are in fair condition, although the late drought pinched them some. Rye crop very good.

Templeton (LUCIEN GOVE). — Hay crop much lighter than was anticipated the middle of June; quality good. Yield of early potatoes light; price \$1 per bushel. Outlook rather poor for late potatoes. Apples have dropped badly. Pears light; peaches extra; plenty of blueberries; prospect good for blackberries. Feed in pastures very much shortened by hot, dry weather. Cows are shrinking in milk and butter. A good soaking rain much needed.

Fitchburg (DR. JABEZ FISHER). — Insects are unusually absent. Rather more hay than last year and quality fully as good. Crop of late potatoes will be small unless rains come soon. Prospect of nearly a full crop of apples of the finest quality for many years. Pastures very dry. Milk dealers will raise the price of milk August 1.

Leominster (W. B. HOSMER). — The very favorable weather for haying has secured to us an excellent quality of hay and nearly an average quantity. Early potatoes not an average crop; price \$1 per bushel. Indications unfavorable for late potatoes on account of the hot, dry weather. Apples, although dropping considerably, are yet favorable for nearly an average crop. On moist pasture land feed is good. Rye crop better than last year.

Lancaster (S. C. DAMON). — Hay crop three-fourths of last year's crop in quantity; quality good. Not a large yield of early potatoes; price \$1 per bushel. Too dry for late potatoes. There will not be a full crop of apples. Feed is short in pastures. Grass lands do not show any green.

Worcester (H. R. KINNEY). — Grass was light and some waited for it to grow until it got rather too ripe; quality, as a whole, better than last year. Yield of early potatoes very light; price 90 cents to \$1.10 per bushel. Late potatoes are looking poorly and are blighting some. Apples are looking very well. The season

has been unfavorable for potatoes all along and the bugs have been numerous.

Westborough (B. W. HERO). — Hay crop larger than last year and of the best quality. About two-thirds of a crop of early potatoes; price \$1 per bushel. Very poor prospect for late potatoes unless we get rain soon. Prospect of about half a crop of apples. Pastures are getting very dry. Rye about an average crop.

Southbridge (G. L. CLEMENCE). — Hay crop ten per cent larger than last year; quality about the same. Prospect of an average crop of late potatoes. Prospect good for the apple crop. The dry weather has made pastures very short.

Dudley (J. J. GILLES). — Quantity of hay one-fourth more than last year; about an average quality. Yield of early potatoes about three-fourths of an average; price 85 cents per bushel. Prospect of an average crop of late potatoes and half a crop of apples. Pasturage excellent until middle of July but now poor, owing to drought. Rye an average crop.

Sutton (O. P. JOHNSON). — We have had a splendid time to get our hay, and while the quantity is less than last year the quality is fully as good. Early potatoes not an average yield; price \$1 per bushel. Late potato vines are looking splendidly. Pastures beginning to feel the drought. Apple crop will not be nearly so good as the blossoms promised.

Douglas (T. M. POTTER). — Hay crop about a third larger than last year and of good quality. Owing to drought the crop of early potatoes is short. Indications not very good for late potatoes. Prospect of a small crop of apples. Pastures dried up and turned brown. Rye crop good.

MIDDLESEX COUNTY.

Hopkinton (W. V. THOMPSON). — Hay crop a little better than last year. Dry weather has hurt potatoes. Prospect poor for the apple crop. Pastures are dry. We have had little rain this month.

Framingham (H. S. WHITEMORE). — Hay crop thirty per cent more than last year and of fine quality. Light yield of early potatoes; price about \$1 per bushel. Indications very poor for late potatoes, owing to dry weather. Apples are dropping fast. Pastures are drying up and cattle have to be fed in the barn. Corn is suffering very much and potatoes are turning yellow.

Sherborn (N. B. DOUGLAS). — Hay crop one-fifth larger than last year and one-fourth better in quality. Small yield of early potatoes; price \$1 per bushel. Prospect of half a crop of apples.

Pastures very short. Rye crop very good. All vegetation has suffered terribly the past three weeks. Many fields of potatoes are dead, and also much corn on thin soil.

Marlborough (E. D. HOWE). — Hay crop about as last year. Prospect good for late potatoes. Prospect of about three-fourths of an apple crop. Pastures are dried up and cattle have to be fed almost entirely in the barn. About eighty per cent of last year's rye crop.

Concord (W. H. HUNT). — The hay crop is nearly all secured in good condition. Corn and potatoes on light land are suffering from dry weather. Late potatoes will do well if we have rain soon. Prospect of a light crop of apples. Pastures suffering from dry weather. Rye crop a good one.

Groton (DANIEL NEEDHAM). — July has been remarkably good as a harvest month. Most of the hay has been secured without injury. Early potatoes have yielded fairly well; price \$1.25 per bushel. Indications for late potatoes good if we have immediate rains. Prospect of an average crop of apples. Pastures have been severely injured by dry weather. Rainfall for July two and one-half inches, and with the clear weather and abnormally high temperature five inches would not have been an excess.

Lowell (C. L. MARSHALL). — Hay crop larger than last year, with quality fully as good. Early potatoes yielded poorly; price ranged from 75 cents to \$1.25 per bushel. Indications for late potatoes poor on account of so much dry weather. Prospect fair for apple crop. Pasturage very poor. Rye and oats have been very good, with larger yield than last year.

Wilmington (C. W. SWAIN). — The hay crop has been secured in excellent condition, and the crop is larger than last year. Light yield of early potatoes; price \$1 per bushel. Late potatoes have suffered from drought. Prospect for apples not as good as earlier in the season. Pastures are in fair condition.

Winchester (MARSHALL SYMMES). — Both quantity and quality of hay much better than last year. Yield of early potatoes extremely light. Very poor prospect for late potatoes. There will be but few apples. Pastures entirely dried up. Since about the middle of July extraordinary heat and drought have prevailed and everything is parched. Very few cauliflower or cabbage plants have been set.

ESSEX COUNTY.

Danvers (C. H. PRESTON). — Hay crop lighter than last year but of good quality. There is general complaint of a small crop of early potatoes, and the dry weather will probably hurt late ones. The apple crop will be small. Feed in pastures is poor.

Marblehead (W. S. PHILLIPS, Jr.). — Average fields exceed last year's crop of hay and the quality is extra. Early potatoes below the average in yield and size. Outlook for late potatoes not very favorable. The apple crop will be small, as much of the fruit has dropped. Pastures poorer than for several years. The long drought and hot weather greatly injured many crops. Corn about holds its own.

Topsfield (B. P. PIKE). — Hay crop about as large as last year and of excellent quality. Light crop of early potatoes; price 90 cents per bushel. Prospect of only about one-half a crop of apples. Pastures very dry.

Ipswich (O. C. SMITH). — About three-fourths of last year's hay crop, with quality good. Early potatoes small in yield and size; price \$1 per bushel. Late potatoes will be small; one-half of last year's crop. Some farmers have very few apples and some orchards promise well. Pastures are dried up. The hot weather with a long drought has prematurely stopped the growth of potatoes, the vines have died and the tubers are ripening very small. Corn is also suffering.

Rowley (T. P. HALE). — Fine hay, but most of it light as we cut it early. Very light crop of early potatoes; price \$1.25 per bushel. Indications point to only about one-half a crop of late potatoes. Prospect very poor for apple crop. Pastures very short and dry. Rye crop good. Dry weather is seriously affecting early sweet corn.

West Newbury (J. C. TARLETON). — About two-thirds of a hay crop; of good quality. Early potatoes rather light yield; average price \$1 per bushel. Late potatoes will be very light if rain does not come soon. Apple crop promises to be very light and they are dropping off. Pastures are drying up badly. Rye crop heavier than last year and of better quality.

Groveland (ABEL STICKNEY). — Quantity of hay about as last year and quality never better. Yield of early potatoes good; price about \$1 per bushel. Indications point to a light crop of late potatoes. Apples will be plenty if the season is favorable. Pastures dry. We are having a sharp drought and corn rolls in most of the fields.

Haverhill (EBENEZER WEBSTER). — Quantity of hay not quite up to last year; quality good. Rather short yield of early potatoes; price about \$1 per bushel. Indications point to a light crop of late potatoes on dry land. Apples have dropped some, so that those left are of good size. Rye crop an average. Crops of all kinds are suffering for want of rain.

NORFOLK COUNTY.

Cohasset (E. E. ELLMS). — Hay crop better than last year and secured in splendid condition. Early potatoes have not yielded well; price \$2 per bushel. The prospect for late potatoes and apples is very poor. Rye crop about the same as last year. The borer is killing cucumber and squash vines. Owing to dry weather pastures are very poor and milch cows are fed at the barn.

Weymouth (H. W. DYER). — Hay crop larger than last year on low land, but on high land rather light. Large yield of early potatoes. The present rains may save late potatoes, so as to have a large crop. Prospect of a fair apple crop. Pasturage very poor.

Millis (E. F. RICHARDSON). — Hay crop better than last year. Early potatoes only about one-half a crop; price \$1 per bushel. Late potatoes promise poorly, especially on high land. Prospect fair for apple crop. Pastures are drying up.

Medway (M. MORSE). — Wire worms have seriously injured my corn. Think hay crop less in quantity than last year, but fully as good in quality. The crop of early potatoes will be small, and the prospect is that late potatoes will be poor, owing to the hot, dry weather. Fruit has dropped badly and the apple crop will be light. Pastures are dried up.

Franklin (C. M. ALLEN). — Hay crop larger than last year and of equally as good quality. Yield of early potatoes light; price \$1 to \$1.25 per bushel. Prospect of a medium crop of apples. Pastures dried up except on very wet ground. Rye crop better than last year. Nearly every field of corn is more or less rolled up and millet is asking for water, and we think these two plants stand drought best of any.

Norfolk (J. W. HINKLEY). — About an average crop of hay. Fair yield of early potatoes. Prospect for late potatoes poor. Apples promise to be generally below the average, though some trees are doing very well. Pastures very dry. Dry weather and excessive heat coming just after the cutting of hay is bad for the second crop, and it will probably be light except on wet land. Dry weather has injured almost all crops in this vicinity.

BRISTOL COUNTY.

Mansfield (D. E. HARDING). — Hay crop very good, but some spoiled by the long spell of bad weather in the early part of the season. Fair yield of early potatoes. Prospect not favorable for late potatoes. Small crop of apples. Pastures dry and parched. Rye crop about the same as last year.

Attleborough (ISAAC ALGER). — Hay crop fifteen per cent better than last year. Early potatoes are below the average. Prospect of a small crop of late potatoes and apples. Pastures are drying up very fast. Little rain has fallen since July 3. Day after day of burning sun has completely changed the favorable outlook of last month to a very unfavorable outlook for this month.

Raynham (N. W. SHAW). — Rose bugs have nearly ruined grapes and many other things by their ravages. Hay crop larger than last year, and on the whole perhaps as good. Early potatoes have not yielded well; price very low, about 60 cents per bushel. Too dry for late potatoes. Most all kinds of apples have fallen off badly. Rye crop an average one. For the last three weeks no rain to speak of has fallen, and consequently everything is suffering.

Somerset (JOSEPH GIBBS). — The hay crop was secured in fine condition and the quality will be good. The potato crop will not be on the whole as good as last year. Apples will be a short crop. Pears three-fourths of a crop. Corn is making good growth where not affected by drought. Rye is an unusually heavy crop.

Dartmouth (L. T. DAVIS). — Quantity of hay rather less than last year, but quality first class. Early potatoes not dug yet, but promise finely. Apple crop will be poor in this section. Pasturage poor. On slightly moist land the corn crop is looking finely; on other land it looks well but rolls some.

PLYMOUTH COUNTY.

Marshfield (G. J. PETERSON). — Rose bugs are quite plenty, and have done some damage. Hay crop about an average and of excellent quality. Heavy crops of hay have been secured on portions of the dike lands. Early potatoes are a failure on uplands. Late potatoes promise to be good on low lands, but on high a failure. Apples are falling off badly. Pastures are burned up. Rye crop an average. Frost on the morning of the 7th.

Kingston (J. H. CUSHMAN). — Hay crop fully equal to last year and of better quality. Early potatoes have been very good, and selling at an average price of \$1 per bushel. Owing to dry weather late potatoes are very small. Apple crop promises to be about as large as last year. Pastures very dry. Rye crop fully as good as last year. The ground has not been wet since July 3.

Halifax (G. W. HAYWARD). — Hay of excellent quality and of average quantity. Early potatoes yielded very poorly; \$1 per bushel has been the price. There are but few apples in this vicinity. There is no feed in the pastures. We are having a

very severe drought, and there has been but very little rain since July 3. Corn seems to stand the drought the best, but many fields roll up badly.

West Bridgewater (F. E. HOWARD). — Hay crop, except that cut in June, as large and as good as last year. Yield of early potatoes not very large; price \$1 per bushel. Prospect for apple crop very poor. One man in this town has raised thirty-two acres of oats, and harvested them in good condition the present week. The hot spell of weather tells hard on all crops.

Middleborough (C. E. WESTON). — The season has been without a parallel for securing the hay crop, and English hay has all been cut and housed in fine condition. Fresh haying has just commenced. Early vegetables are plenty and in good demand. Early potatoes have yielded fairly well; price \$1.50 per bushel. Apples promise to be a fair crop, rather better than last year, although they have dropped off badly. Pastures are nearly dried up. Rye and straw are better than last year and larger quantity.

Wareham (A. SAVARY). — Hay crop generally good both in quantity and quality. Early potatoes have yielded well, but late potatoes promise poorly on account of drought. No apples. Pastures are drying up and foddering is necessary. We have had an unusually dry summer; no rain of any consequence since May. Vegetation is suffering fearfully. The cranberry crop is suffering from dry, hot weather and from the span worm, and the crop will not be over one-half the usual amount.

BARNSTABLE COUNTY.

Falmouth (DANIEL WICKS). — Hay more than last year in quantity and of good quality. Early potatoes hardly a fair crop. Late potatoes promise to be a failure. Very poor show for apples as to quantity and of the poorest quality. We are having a very severe drought, the worst since 1876. We had wet until the 4th of July, and since then no rain but a scorching sun, and vegetation was not prepared for it.

Mashpee (W. F. HAMMOND). — Hay crop larger than last year and of good quality. Early potatoes small and a very poor crop. Late potatoes will be a small crop on account of the dry weather. Prospect very poor for apple crop. Pastures are getting to be very poor. Rye crop is good.

Barnstable (JOHN BURSLEY). — Hay on old fields lighter than last year; on new, seeded good; quality equal to last year. Early potatoes yielded very poorly; price \$1 per bushel. Prospect of light yield of late potatoes and no apples. Pasturage is very poor.

Acreage of rye double that of last year and yield good. Corn on high ground is at a standstill. Potato tops are dying with tubers the size of hens' eggs.

Dennis (JOSHUA CROWELL). — Hay crop one-fourth larger than last year and of better quality. Baldwin apples are fair; others less than an average. Pasturage suffering from dry weather. Cranberries are also feeling the hot weather of the last few days, and the prospect is not as encouraging as two weeks ago.

Eastham (J. A. CLARK). — Much larger hay crop than last year and of good quality. Think there will be a light yield of early potatoes and the prospect for the apple crop is poor. Pastures all dried up. Rye crop very good; better than last year. All crops need rain badly.

DUKES COUNTY.

West Tisbury (WM. J. ROTCH). — Hay crop one-half larger than last year and quality excellent. Fully an average crop of early potatoes; price opened at \$1 per bushel, now 60 cents. Indications good for late potatoes and poor for apples. Pastures now suffering from drought. Rye crop about the same as last year.

NANTUCKET COUNTY.

Nantucket (C. W. GARDNER). — Hay crop less than last year, but extra in quality. Early potatoes have yielded poorly, and the prospect is poor for late potatoes unless it rains soon. Pastures mostly dried up and newly seeded grass all browned. We are having a very sharp drought and corn is beginning to curl.

MASSACHUSETTS
CROP REPORT

FOR THE

MONTH OF AUGUST, 1892.

ISSUED BY

WM. R. SESSIONS,
SECRETARY STATE BOARD OF AGRICULTURE.

BOSTON:

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1892.

CROP REPORT FOR THE MONTH OF AUGUST, 1892.

OFFICE STATE BOARD OF AGRICULTURE,
BOSTON, MASS., Sept. 1, 1892.

PROGRESS OF THE SEASON IN GENERAL.

The August Report of the United States Department of Agriculture on the condition of growing crops states that the August returns show a slight improvement in the condition of corn, raising the general average from 81.1 in July to 82.5 in August. In only four years (1881, 1886, 1887, 1890) since the initiation of crop reporting has there been lower condition at the same date. It is noticed that the lower figures are from the districts that furnish a surplus.

The August returns of wheat relate to spring wheat only. The general average has declined from 90.9 on July 1 to 87.3 for the present month. In the mountain States the condition is generally high.

The condition of oats is practically the same as last month. The August condition, 86.2, is very low.

Spring rye declined from 92.7 to 89.8 during the month, while barley fell off one point, standing at 91.1.

The acreage of buckwheat is reported at 101.3 and condition at 92.9.

There has been a decline of nearly 4 points in the condition of potatoes, the average being 86.8. This is a very low condition. The principal decline of the month was in the New England and Middle States, where there was quite a heavy drop from the high July condition.

The average of tobacco declined from 92.7 to 88.8 during the month, but the present condition is highest since 1885.

Cotton shows a reduction in condition during July from 86.9 to 82.3. This is the lowest average since August, 1886.

TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

[FROM UNITED STATES WEATHER-CROP BULLETINS]

Week ending August 1. — Week unusually warm to the east of the Mississippi, the maximum departure from the normal temperature occurring over the Middle Atlantic States. In New England the daily excess ranged from 3° to 6° . Cooler than usual in all sections to the westward, except on the North Pacific coast, where it was slightly warmer than usual. Excess of rainfall general throughout the Northern States; also throughout the south-west and lower Mississippi valley. Total absence of rain in the Rio Grande valley and to the westward of the Rocky Mountains.

Week ending August 8. — Week slightly cooler than usual in the Gulf States and on the Pacific coast. About the normal temperature conditions prevailed over the lower lakes, Ohio valley and Middle Atlantic States. From the central and upper Mississippi valley westward to the Rocky Mountains the week was unusually warm. Over nearly the whole of the United States the week gave but little rain, and over a very extensive area there was no rain at all.

Week ending August 15. — Week warmer than usual over all northern and central districts eastward of the Rocky Mountains. Over the plateau districts and in California, except along the northern coast, it was much cooler than usual. More than the usual amount of rain has fallen in the Gulf States, New England, the lower lake region and in other small areas. Drought of more or less severity now prevails on the Atlantic coast from Maryland to South Carolina, and also over portions of Illinois, Southern Michigan, Montana and Kentucky.

Week ending August 22. — Week warmer than usual from Western Texas north-eastward to Missouri; over all districts from the upper Mississippi valley eastward to the Atlantic coast; and over the plateau regions westward, including all Pacific States. Slight frosts occurred in Wyoming. Very heavy rains have fallen over portions of the Central Gulf States and other sections. Over much of the greater part of the country, however, the rainfall of the week has been decidedly below the average. The drought of the previous

week has been intensified, and is now general over the principal agricultural States from the Dakotas, Kansas and Nebraska eastward to the Atlantic coast.

NEW ENGLAND WEATHER AND CROPS.

[FROM UNITED STATES WEATHER-CROP BULLETINS.]

Week ending August 1.—Temperature and sunshine excessive and precipitation above average, except in Eastern Maine, where severe drought prevails, especially in southern counties, injuring early potatoes, garden truck, pastures, etc.; potatoes promise well in North but light in South.

Week ending August 8.—Precipitation about average, except on Cape Cod; temperature and sunshine normal. Corn and tobacco making great growth; pears good crop in South; much damage by hail on 6th in northern part of Sullivan and Merrimack counties, New Hampshire.

Week ending August 15.—Temperature and precipitation above and sunshine about normal; severe hail-storm in New Hampshire and Vermont on the 10th did considerable damage; general and unusually heavy rain during the thunder-storm of the 12th; potatoes and cranberries light; corn and tobacco good.

Week ending August 22.—Precipitation below and temperature and sunshine above normal; severe drought prevails in southern Massachusetts; corn and tobacco have made heavy growth; horn fly causing suffering among cattle; much damage to tobacco by hail on 12th at Bethlehem, Conn.

MASSACHUSETTS CROPS.

The August Report of the United States Department of Agriculture gives the following for acreage and condition of crops Aug. 1, 1892: Average condition of corn, 93; average condition of oats, 95; average condition of barley, 96; acreage of buckwheat compared with last year, 98; average condition of buckwheat, 95; average condition of potatoes, 80; average condition of tobacco, 98; average condition of timothy, 91; product of clover compared with a full crop, 94; average quality of clover hay, 100 standing for high quality, 98; average condition of pasturage, 88;

average condition of apples, 66; average condition of peaches, 86; average condition of grapes, 82.

CORN.

Corn generally promises to be a good crop, and many correspondents report it as being in excellent condition. This is particularly true of the western counties. In some portions of south-eastern Massachusetts the crop has been injured by drought, yet even there the crop promises fairly well on the whole.

ROWEN.

In general the crop of rowen promises to be very near if not quite an average. It has grown well since the last report, having been greatly helped by recent rains. In Essex County and in south-eastern Massachusetts generally the crop will be light. Many correspondents report no rowen at all, especially in Plymouth and Barnstable counties.

POTATOES.

Probably the potato crop will not be over three-fourths of an average. Many correspondents refer to it as being light. Complaints of blight and rot come from Berkshire, Hampden, Worcester, Middlesex and Bristol counties. The acreage is somewhat smaller than last year.

OATS.

The oat crop averages well with last year. Complaints of rust have been received from nearly every county.

APPLES.

Last month quite general complaint was made of apples dropping from the trees and that the crop promised to be a light one. Correspondents continue to report them dropping and during the recent storm many were blown off by the wind. It is thought that the crop in the western counties will be from one-half to three-fourths of an average. It is believed that the quality will be a full average.

PASTURAGE.

Since the recent rains pastures have quite generally improved and in many sections are excellent for this season

of the year. In south-eastern Massachusetts they were badly injured by the severe drought.

CRANBERRIES.

A special report on cranberries has been prepared and will be found printed on pages 22-27 of this bulletin.

OTHER CROPS.

The onion crop is uneven in condition and yield. In eastern sections the drought has injured it, but in the western sections the crop is fair. Celery looks well, but is late. Cauliflowers, beans, cabbages and other vegetables are good. Tobacco has been generally harvested and is a fine crop. A number of sales at from twenty-five to thirty-two cents per pound have been made.

INSECTS.

Complaints of severe annoyance to cattle by flies, supposed to be the horn fly, have been received from Williamstown, Windsor and Cheshire in Berkshire County; Northfield in Franklin County; Worthington and Chesterfield in Hampshire County; Wilbraham, Ludlow and Monson in Hampden County; Sutton, Warren, Leonminster and Spencer in Worcester County; Wareham in Plymouth County; and Eastham in Barnstable County. A number of complaints have been made of ravages by the fall tent caterpillar. Scattering references are also made to grasshoppers, cabbage worms, tomato worms, cranberry insects, onion thrips, squash root maggots, strawberry grubs, potato beetles, curculios, muck worms, cut worms and canker worms.

THE HORN FLY.

Several correspondents, and others, having called the attention of this office to the probable presence of the cattle pest known as the *horn fly*, it has been thought best to print the following in this issue of the Crop Report. The information has been largely gleaned from Bulletin No. 62 of the New Jersey Agricultural Experiment Station, — Prof. John B. Smith, entomologist.

The fly first appeared in the vicinity of Philadelphia, probably introduced on cattle imported either in 1886 or 1887. It was known and described as far back as 1830 as a native of the countries bordering on the Mediterranean Sea. The fly is about one-sixth of an inch in length, of a dark ash-gray color, with a faint yellowish tinge. Its head is almost entirely taken up by the eyes, which are dark red-brown. The legs are moderately long, blackish, the knee joints marked with reddish, the whole quite densely set with stiff blackish hair. It seems to be confined to horned cattle, worrying them both night and day, whether in the stable or in the field. It breeds most freely in early summer, being most numerous in June and July. In biting the fly buries itself among the hair, spreading out its wings at the same time. Early in the season it evinces a special fondness for the horn, clustering there in great numbers and biting preferably around the root. Later in the season it seems less confined to the head, but covers the region back of the shoulder blades and at the root of the tail, and, in fact, attacks every part of the body.

The egg is laid in fresh cow droppings, and from this egg hatches a little white, footless grub. The larvæ are dependent for nourishment upon a soft, partly liquid substance, and if they be deprived of that they perish. By sending a boy over the pasture every other day with a shovel, and instructions to thoroughly spread out all cow droppings, all eggs and larvæ would be destroyed. A sprinkling of lime would answer the same purpose, but is more expensive. The whole life cycle from egg to perfect insect is from twelve to fifteen days. Among the destructive agents for the perfect insect tobacco powder is the best. It should be dusted on the cattle among the hair where the flies most usually congregate. For protection from the attack of the fly apply carbolated fish oil to those parts of the body where the powder could not well be used, and then sift X. O. Dust, or some other tobacco powder, in the hair where it will lodge. Pyrethrum or insect powder may be used, but is not so highly recommended.

Where cows are kept in the stable at night, liberal use of plaster or other absorbent should be made to the manure heap and in the stable, and freely mixed with the droppings, to absorb the moisture and deprive the larvæ of food. Cleanliness in the stable is of course essential.

Professor Smith writes this office, under date of August 20, that the insect has extended northward into Canada, south to Florida and west to Ohio.

MASSACHUSETTS WEATHER.

Meteorological Data for August, 1892.

[Furnished by New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Cloudy.	Partly Cloudy.	Cloudless.
Monroe, .	65.1	87	11	48	7	6.43	12	-	8	10	13
Springfield, .	71.4	91	10	52	28	6.58	14	S.	11	11	9
Amherst, .	67.8	90	10	52	15, 23	7.50	10	-	-	-	-
Royalston,*	69.8	88	10	54	27	8.12	11	-	18	8	5
Fitchburg,*	67.4	90	10	52	27	7.75	11	W.	14	9	8
Worcester, .	69.8	92	10	52	27	5.51	11	S.	11	20	0
Dudley, .	70.6	93	10, 18	51	16	4.74	10	-	-	-	-
Framingham,	68.6	94	10	48	30	4.48	10	-	-	-	-
Concord, .	68.3	93	9	50	30	4.20	9	S. W.	14	8	9
Lowell, .	70.0	92	10	52	27	4.31	9	-	-	-	-
Boston, .	70.2	94	10	55	27, 28	4.87	8	S. W.	10	12	9
Taunton, .	69.8	97	10	52	24, 30	2.87	7	N. E.	12	9	10
New Bedfd,	69.0	90	10	51	24	3.82	9	-	-	-	-
Hyannis,*	74.3	95	10	60	24	2.08	6	S. W.	12	9	10
Provincet'n, .	70.1	90	10	56	28	3.70	5	N. E.	15	11	5

* Data from thermometer not self-registering.

Summary.

Temperature. (F.). — Monthly mean, 69.4° ; highest monthly mean, 74.3° , at Hyannis; lowest monthly mean, 65.1° , at Monroe; maximum, 97° , at Taunton on the 10th; minimum, 48° , at Monroe on the 7th; range, 49° ; greatest local monthly range, 46° , at Framingham; least local monthly range, 34° , at Provincetown; greatest daily range, 36° , at Monroe on the 11th; least daily range, 2° , at Boston on the 27th. Average temperature for August at Springfield for twenty-five years, 70.5° ; average for August, 1892, 71.4° ; departure, $+0.9^{\circ}$. Average temperature for August at Boston for twenty-two years, 69.2° ; average for August, 1892, 70.2° ; departure, $+1.0^{\circ}$.

Precipitation. — Average, 5.26 inches; greatest, 8.12, at Royalston; least, 2.08, at Hyannis. Average for August at Springfield for forty-five years, 4.56; for August, 1892,

6.58; departure, +2.02. Average for August at Boston for twenty-two years, 4.43; for August, 1892, 4.87; departure, +0.44.

Prevailing wind. — South-west.

Thunder-storms. — 4th, 5th, 9th, 11th, 12th, 13th, 19th, 26th, 31st.

REMARKS.

The weather for Massachusetts for the month of August was characterized by a nearly average temperature, air pressure and sunshine, while the precipitation was above the average in the central counties and at or below the average in the eastern.

The maximum temperature occurred generally on the 10th, ranging from 88° to 98°. The minimum was felt on different dates at different stations, and was about 50°; hence the range for the month was not nearly so large as was experienced in July.

The dry weather that prevailed during the greater part of July was continued through most of August in Plymouth and Bristol counties, causing damage to nearly all crops there; fruit dropped badly, field and garden crops dried up for want of water, and fields and pastures turned brown and bare. But in the central and western parts of the State seasonable rains fell, and all vegetation was given rapid growth.

The local storms were heavy and frequent, and much damage was done by lightning. During a thunder-storm in north-eastern Massachusetts on the 5th, 0.50 inch of rain fell at West Newbury; Geo. Arnald was killed at Salem and John Hannan at Peabody during the same storm, by lightning. High winds together with lightning did considerable damage to buildings and crops at Phillipston, and a set of buildings was burned at Otter River on the 9th. On the 12th a heavy rain at Pittsfield did damage to the streets amounting to several thousand dollars. At Boston, on the morning of the same day, 0.85 inch of rain fell from 12.45 to 1.05 A.M., the greater part falling in ten minutes of the time. On the 19th, while Chas. B. Benson was standing in a barn door at Heath, he was struck by lightning and instantly killed. During the storm of the 25th to 27th from two to four inches of rain fell

over the greater part of the State, doing considerable damage to fruit, tobacco, corn, etc. Roads were badly washed in the Westfield valley.

An observer at Fitchburg, Mass., reports a flock of wild geese flying south-westerly on August 31. A writer in the "Sentinel," printed in that city, states that that was the earliest flight of wild geese southward that he had ever witnessed or seen recorded, and adds that this is said to indicate the early approach of cold weather.

SEPTEMBER WEATHER.

The following is compiled from the records at Boston for twenty-one years. The mean temperature was 62° ; the warmest September was that of 1891, with an average of 67° , and the coldest was that of 1876, with an average of 59° . The highest temperature during any September was 102° on the 7th in 1881, and the lowest 34° on the 26th in 1879. The average date of the first killing frost is October 1.

The average precipitation is 3.12 inches; the greatest amount was 10.93 inches in 1882 and the least 0.31 inch in 1884.

NOTES OF CORRESPONDENTS.

(Returned to us August 30.)

BERKSHIRE COUNTY.

Sandisfield (G. A. SHEPARD). — Potato bugs have been plenty ; other insects have done little damage. Excellent prospect for the rowen crop. Apples scarce and of inferior quality. Potato crop about sixty per cent of last year's ; quality good. Good prospect for corn crop. Pastures doing remarkably well. Oat crop about ninety per cent of last year's ; some rust. No crop has suffered from the drought.

Sheffield (DWIGHT ANDREWS). — Potato bugs doing the most damage. Prospect for rowen fair. It is not a fruit season in this locality. Apples are dropping fast. Potatoes blighted somewhat, but late ones promise fairly. Corn promises well. Pasturage in fair condition. Oat crop not as good as last year ; somewhat rusted.

Becket (WM. H. SNOW). — Potato bugs are doing most damage. Rowen is very good, owing to frequent showers. Some trees seem to hang full of apples that did not show last month. Potatoes a light crop ; some pieces almost a failure. Corn is very stout, but late. Pasturage is very good.

Lee (A. BRADLEY). — Cabbage worms and potato bugs doing the most damage. Prospect good for rowen. Apples have fallen from the trees very much during the last month. Potato crop not so good as last year. Corn promises extra well. Pasturage in better condition than usual. Oats about an average crop.

Pittsfield (R. H. COOKE). — A new black worm is damaging leaves and injuring the trees. Prospect for rowen good. Apple crop rather light. Good prospect for the corn crop. Pasturage in very good condition. Oats not quite up to last year.

Windsor (H. A. FORD). — Horn fly on cattle very numerous. Prospect for rowen good. Apple crop looks better than a month ago. Potato crop will not be eighty per cent of an average. Corn promises well, except where damaged by wind and hail. Pastures in average condition. Oat crop about ninety per cent of an average.

Cheshire (L. J. NORTHER). — The horn fly annoys the cattle night and day. Prospect for rowen fairly good. The apple crop will be better than was expected. Potatoes promise to be about sixty per cent of a full crop. The corn crop promises to be rather more than an average one. Feed in pastures is generally short. Oat crop will be about three-fourths that of last year.

Williamstown (S. A. HICKOX). — The horn fly on cattle is very troublesome. Good prospect for rowen. Potatoes promise a light crop. Corn promises well. Pasturage in excellent condition. The oat crop will be fifteen per cent less than last year's. The month of August has been very favorable to all growing crops.

FRANKLIN COUNTY.

Monroe (D. H. SHERMAN). — Grasshoppers are plenty. Prospect for rowen crop good. Apples are a very light crop, of poor quality. Potatoes a light crop; no rot as yet, but rusty on low land. Prospect for corn crop very good. Pasturage was pinched by hot, dry weather, but has improved with late rains. Oats about the same as last year.

Buckland (J. D. AVERY). — Grasshoppers doing the most damage; about two-thirds the usual amount grown. Potatoes rather below the average in yield. Excellent prospect for the corn crop; considerably more than an average. Feed in pastures is short. The apple crop will be about three-fourths of an average, and they are unusually smooth and fair.

Northfield (CHAS. POMEROY). — Caterpillars, and the horn fly on cattle, are our most troublesome insects. Apples falling off badly. Potatoes promise about a three-fourths crop. Prospect for corn very good, except on very dry land. Pasturage in average condition; better than last month. Oats not as good as last year; injured by rust.

Deerfield (CHAS. JONES). — Rowen will be fair, but late. Potatoes are blasting some, and there will be a small crop. Corn more than an average crop. Pastures are looking fresh, but feed is not very abundant. Oat crop above the average. Tobacco is a large growth, and the harvest has begun. Apples are falling from the trees, and there will not be a full crop.

Leverett (W. L. BOUTWELL). — Rowen about an average. Barely enough apples for home use. Potatoes a small crop. Good prospect for the corn crop. Pasturage in better condition than a month ago. Oat crop about seventy per cent of last year's, and was cut mostly for fodder.

Sunderland (W. L. WARNER). — Rowen looking finely. Apple crop not one-fourth as large as last year. Light crop of potatoes.

Corn good. Tobacco good in both quantity and quality. Onions two-thirds to three-fourths crop.

Montague (C. S. RAYMOND). — Wire worms and grubs are damaging potatoes, and tent caterpillars are quite numerous. Rowen a light crop. Potatoes about half of last year's crop. Corn promises to be better than the average. Pasturage rather short. Oat crop rather better than last year. Apples a fair crop. Pears about a medium crop.

HAMPSHIRE COUNTY.

Enfield (D. O. CHICKERING). — Tent caterpillars are doing the most damage. Prospect for rowen very good. Potatoes are about two-thirds of an average crop. Prospect for corn very good. Pasturage in good condition. Oat crop better than last year.

Pelham (J. L. BREWER). — Tent caterpillars doing most damage. Prospect for rowen good. Apples about one-fourth crop. Potatoes a light crop. Good prospect for corn. Pasturage in good condition. Oat crop about as last year's. A large crop of blueberries and whortleberries has been gathered.

Belchertown (H. C. WEST). — Rowen bids fair to make up for the short hay crop. Apple crop not up to expectations, particularly in regard to quality. Potatoes a fair crop. Corn more than an average crop. Pasturage in good condition. Oat crop much better than last year, although there was a little rust.

Hadley (H. C. RUSSELL). — Tent caterpillars doing most damage. Fair rowen crop. Early potatoes a very poor crop and price low : about fifty cents per bushel. Prospect of a good corn crop. Pasturage not up to average condition. Oats about as last year.

Southampton (C. B. LYMAN). — The rowen crop promises to be fair. Pastures are looking quite fresh. Potatoes will be a light crop : some report the lightest for years. Corn crop good. Oats about as last year. Tobacco is now being harvested, is heavy and in good condition.

Worthington (C. K. BREWSTER). — The horn fly annoys the cattle so that some say it makes a perceptible difference in the yield of milk. Rowen about an average. Prospect for potatoes fair. Prospect for corn very good. Pasturage in rather poor condition. Oat crop about as last year.

Goshen (ALVAN BARRIS). — White grubs and grasshoppers are doing most damage. Rowen a light crop. Potatoes a very light yield and of poor quality ; some late fields were killed outright by hail. Corn good on some fields but ruined by hail on others. Pasturage fairly good. A severe hail storm on August 19 either ruined or greatly injured all crops liable to damage from hail.

Vines were stripped of their leaves and the fruit so bruised as to cause much of it to rot, and what matures will be imperfect. The same is true of apples, pears, grapes, etc.

Chesterfield (HORATIO BISBEE). — Horn fly on cattle most troublesome insect at present. Rowen good but late. Apples a very short crop. Potatoes fair on some fields; very poor on others. Corn a good crop. Pasturage has been poor but shows improvement. Oat crop not so good as last year.

HAMPDEN COUNTY.

Tolland (F. T. MOORE). — Cabbage worms doing most damage. Rowen fair. Apples dropping badly. Potatoes a light crop, some blight and rot and small tubers. Corn promises well. Pasturage in very good condition. Oats a light crop.

Westfield (C. F. FOWLER). — Trees are now covered with the nests of the fall tent caterpillar. Rowen a full average crop. Potatoes do not promise very well. Prospect for corn very good. Pastures rather short. Oats rusted very badly. Tobacco is now being harvested and is a splendid crop.

Agawam (R. DEWITT). — Rowen good. Potatoes a fair crop and very sound. Splendid outlook for corn, and crop nearly ready to cut. Pasturage fair. Oat crop about as last year. Good apples are scarce in this vicinity.

West Springfield (J. N. BAGG). — Tent caterpillars doing most damage. Prospect for rowen good. Early apples plenty, late ones scarce. Potatoes a light crop. Prospect for a large corn crop. Pasturage in good condition.

Chicopee (R. W. BEMIS). — Fall tent caterpillars doing most damage. Rowen fair. Apples not a large crop. Potatoes fair on new ground; early ones not as good as usual. Corn a good crop. Pasturage in very fair condition. Oat crop better than last year.

Hampden (JOHN N. ISHAM). — Prospect for rowen favorable. Potatoes a medium crop, many small ones. Corn a good crop. Pasturage looks well since late rains. Oats a good crop but a little less than last year. Potato tops were dead or bare of leaves on August 20.

Wilbraham (F. E. CLARK). — The horn fly on cattle annoys them terribly. Rowen not up to the average. Potatoes will be a light crop. Corn never promised better. Pasturage is growing shorter every day and farmers are resorting to soiling. Oat crop not up to last year; rusted badly.

Brimfield (S. W. BROWN). — Tent caterpillars are doing the most damage. Prospect for rowen good. About half of last

year's yield of potatoes. Corn good, ten days earlier than last year. Pasturage in fair condition. Oat crop equal to last year's.

WORCESTER COUNTY.

Warren (W. E. PATRICK). — Horn fly on cattle very troublesome. Rowen considerably above the average. Potatoes an average crop. Corn is looking finely and earing nicely. Pastures have improved very much. Oat crop better than last year.

New Braintree (C. D. SAGE). — Little rowen will be cut. Apples about half a crop. Potatoes a three-fourths crop; generally blighted. Corn a fair crop. Pasturage in good condition. Oat crop seventy-five per cent of last year's; more trouble from rust, and grain not as heavy. Cows have done well, and milk and butter have brought fair prices. The recent severe storm injured corn and blew off fruit in exposed localities.

Hardwick (WM. A. WARNER). — The horn fly is very troublesome. Apple crop very light. Potatoes a poor crop. Prospect for corn good. Pasturage rather short, but looking better than a month ago. Oat crop not as good as last year, owing to rust.

Barre (J. L. SMITH). — Very little rowen will be cut, but fall feed will be quite good. Pastures are looking better than a month ago. Apple crop will be light, but quality much better than was expected. Potato crop light. Corn very good. Oats were nearly all cut for fodder, and were a very good crop.

Petersham (S. B. COOK). — Rowen will be fair. Apples fair and large, and the crop will be larger than was expected last month. Potatoes a light crop, small and few in the hill; late ones blasting. Corn a very good crop. Pasturage in fair condition. Oat crop five to ten per cent better than last year.

Winchendon (W. H. SAWYER). — Prospect for rowen poor. Apples are not falling off as badly as last month. Prospect for potatoes fair. Prospect for corn good. Pasturage poor. Oat crop about the same as last year's crop.

Westminster (JOSEPH HAGER). — Rowen promises fairly. The prospect for the apple crop grows better every day; the present storm has blown many off, but that is a benefit rather than otherwise. Potatoes a small crop. Excellent prospect for the corn crop. Pasturage has been dry and short, but is now looking well.

Harvard (PRESTON KNIGHT). — Prospect for rowen very good. Apple crop very good. Potatoes about three-fourths of a crop. Corn crop is very good, but a trifle late. Pasturage in good condition. Oat crop very good.

Bolton (H. E. BABCOCK). — Tent caterpillars and tomato worms doing most damage. Rowen not up to the average. Apples a fair

yield, of good quality. Late potatoes a short crop. Good prospect for corn. Pastures damaged by drought.

Worcester (S. A. BURGESS). — Grasshoppers, fall tent caterpillars, apple worms and cabbage worms doing most damage. Rowen not quite an average crop. Early apples have been good, winter apples an average crop. Potatoes a small crop, of good quality. Corn more than an average crop. Pasturage in good condition. Oat crop about eighty-five per cent of full crop; some rust.

Grafton (S. E. STOWE). — Rowen more than an average crop. Apples have dropped off badly. Late potatoes not up to last year's crop. Corn is of fine growth, and looking well. Pasturage in good condition. Oats an average crop.

Upton (B. A. JOURDAN). — Prospect for rowen very good. Apples dropping off badly. Potatoes are a fair crop, but of small size. Corn crop promises well. Pasturage in very good condition. Oat crop a fair average.

Sutton (O. P. JOHNSON). — The horn fly is troublesome. Rowen promises to be an average crop. Some pieces of potatoes good, others badly rotted. Splendid prospect for corn. Pasturage in the best condition for years. Oat crop not quite up to the average, on account of rust.

Blackstone (L. R. DANIELS). — Potato beetles, tent caterpillars and cut worms doing the most damage. Prospect for rowen very good. Apple crop about one-third of a full crop. Early potatoes were a full crop; late fields do not look promising. Prospect for corn the very best. Pasturage in very good condition.

MIDDLESEX COUNTY.

Marlborough (E. D. HOWE). — Rowen a light crop. Potatoes not over seventy-five per cent of a full crop. Prospect for corn excellent. Pasturage better than a month ago; a full average.

Groton (DANIEL NEEDHAM). — Grasshoppers doing most damage. Rowen good. Potatoes a fair average crop. Corn promises well. Pasturage very much improved in condition. Oat crop not so good as last year.

Westford (ARTHUR WRIGHT). — The fall tent caterpillar and the tomato worm are doing the most damage. Rowen generally good. Apple crop will be hardly an average. Late potatoes good on moist land; on high lands the drought injured them. Corn looks well; crop larger than last year. Old pastures show the effects of the dry weather.

Chelmsford (P. P. PERHAM). — Prospect of large rowen crop. Apples about as last year; quality good. Many fields of potatoes

have been struck with blight. Corn a good average crop. Pasturage never looked better at this season. Oats about the same as last year.

Lowell (C. L. MARSHALL). — Tomato worms are doing the most damage. Rowen good on low land. Potatoes promise poorly; are small, and not over two-thirds an average crop. Corn will be an average crop. Pasturage in poor condition. Oat crop about as last year.

Billerica (J. N. PARDEE). — Fire worms are doing the most damage. Rowen very good. Apple crop a full average. Potato crop short, and rotting. Prospect for corn excellent. Pasturage in very good condition. Oat crop heavier than last year, and harvested in better condition.

Wilmington (C. W. SWAIN). — Prospect for rowen good. Potatoes a very light crop. Corn a good crop. Pasturage in fair condition. Apples promise to be of better quality than for several years.

Concord (WM. H. HUNT). — Asparagus beetles and grasshoppers are doing most damage. Rowen a fair crop. Potatoes a two-thirds crop; good crop on low ground. Corn a good crop. Pasturage up to the average in condition. Oats rusted more than last year.

Winchester (MARSHALL SYMMES). — Rowen will be about an average crop. Apples a light crop; dropping badly. Potatoes about four-fifths of a crop. Sweet corn about an average crop.

Arlington (W. W. RAWSON). — Prospect for rowen very poor. Corn crop very light. The onion crop is very light, celery very small, and roots and all kinds of vegetables must bring good prices this fall.

ESSEX COUNTY.

Danvers (C. H. PRESTON). — Rowen crop rather small. Potatoes a small crop, as compared with last year. Corn a good crop but somewhat damaged by the recent storm. Pasturage in poor condition.

Haverhill (EBEN WEBSTER). — Grasshoppers and fall tent caterpillars doing most damage. Rowen a light crop. Potatoes about two-thirds of an average crop. Prospect for corn crop good. Pasturage dry and short. Oats a fair crop, mostly fed green.

Groveland (ABEL STICKNEY). — Grasshoppers are doing most damage. Prospect for rowen poor. Potatoes a light crop. Corn does not promise as well as before the storm. Pasturage short and dry before rain but looking better now. Oats all cut for hay.

Newbury (G. W. ADAMS). — Tent caterpillars are doing the most damage. Rowen a small crop. No late potatoes to speak of.

Corn promises well. Pasturage in good condition. Oat crop rather better than last year.

Ipswich (O. C. SMITH). — Fall tent caterpillar doing most damage. Rowen about thirty per cent of average crop. Potatoes light crop, about sixty-five per cent. Corn will be an average crop if not injured by frost. Pasturage in poor condition. Oats about sixty-five per cent of last year's crop. Onions, beets and parsnips promise a fair crop.

Topsfield (B. P. PIKE). — Rowen a very light crop. Apples dropping badly. Potatoes a very light crop. Corn not as good as last year, ears not as long or fodder as heavy. Pasturage rather short. Oat crop not nearly as good as last year.

NORFOLK COUNTY.

Cohasset (E. E. ELLMS). — No rowen. Potatoes a good crop. Prospect for corn crop good. Pasturage very much injured by drought. Oat crop same as last year. Pasturage has been so poor that farmers have been obliged to feed their mowings.

Weymouth (H. W. DYER). — Prospect for rowen fair on low land. Apple crop rather light. Dry weather is affecting the potato crop; the tops are dying before they are ripe. Corn crop promises fairly. Pasturage is all dried up. Very few oats raised.

Medfield (GEO. R. CHASE). — Prospect for rowen not very good though some pieces are fine. Potatoes will not be a full crop; drought will injure size and quantity. Prospect for corn excellent, best crop for years. Pasturage suffering badly for rain. Oat crop very good as a fodder crop.

Medway (M. MORSE). — The large green tomato worm is working badly. Rowen not good. Apples not a full crop. Potatoes about three-fourths of a full crop. Corn promises well. Pastures are short, but the late rains will improve them.

Franklin (C. M. ALLEN). — Rowen a light crop. Potatoes a light crop. Corn more than an average. Pasturage dried up. Peaches have dropped off badly and will not be over half the usual crop. The hot, dry weather of a part of the season has been a great damage to our farmers.

BRISTOL COUNTY.

Attleborough (ISAAC ALGER). — No rowen. Apple crop not half as large as last year. Potatoes about half a crop. Corn about a two-thirds crop. Pastures all dried up. There has been but one shower since July 3.

Dighton (A. W. PAUL). — The onion thrip is doing the most damage. Very little rowen, because of dry weather. Very few

apples set and they have dropped badly. Potatoes are a light crop, with some rot. Strawberries badly killed. Corn is very poor, some on high lands a total failure. Pasturage very poor. Oat crop not as good as last year. Drought the severest ever known here, but it is now raining.

Berkley (R. H. BABBITT). — The strawberry grub and the cranberry worm are doing the most damage. No rowen. Apple crop will be light. Potatoes not over half a crop. Corn crop will be very light. Little grass in pastures. Turnips will be a very light crop. Oat crop about an average.

Dartmouth (L. T. DAVIS). — The squash root maggot is doing most damage. Rowen not very promising. Potatoes from eighty to eighty-five per cent of a crop. Prospect for corn crop very good. Oat crop fully equal to last year.

Westport (A. S. SHERMAN). — The tomato worm doing most damage. Rowen very poor. Apples will be a fair crop. Potatoes a very good crop. Corn good except on high land where it has suffered from drought. Pasturage very poor except in swampy places. Oat crop rather better than last year. Turnips promise a good crop.

PLYMOUTH COUNTY.

Lakeville (ELBRIDGE CUSHMAN). — Grasshoppers doing the most damage. No rowen. Prospect for apples fully as favorable as last month. Potatoes about one-half a crop. Corn on high ground about one-half crop, on low ground about three-fourths. Practically no pasturage. Oat crop quite as good as last year. Many crops are a total failure on high lands.

Halifax (G. W. HAYWARD). — No rowen. Potatoes are about half a crop, many small ones. Corn a fair crop, though many fields were hurt by drought. No feed in any of our pastures. Oats about the same as last year. Apples will be a light crop.

West Bridgewater (F. E. HOWARD). — Prospect for rowen poor. Apple crop small and of inferior quality. Potatoes not yielding as well as last year. Corn is an average crop. Pasturage very short. Oat crop compares favorably with last year's crop. Impossible to sow grass seed through August, on account of drought.

Hanson (Dr. F. S. THOMAS). — Rowen good on low lands, poor on high. Many apples are dropping before ripe. Potatoes a small crop, but of good quality. Corn crop promises well. Pasturage in good condition.

Marshfield (GEO. J. PETERSON). — No rowen. A fair prospect for late fruit. Potatoes a small crop on highlands, fair on low.

Late-planted corn looks well. Pasturage all dried up. Oat crop a fair average. Only two showers since July 5.

Wareham (A. SAVARY). — Span worm and cabbage worm doing the most damage. No rowen except on very low land. Potatoes a very small crop. Corn a small crop. Pasturage very poor through August. Oat crop about an average.

BARNSTABLE COUNTY.

Mashpee (W. F. HAMMOND). — Fire worms doing most damage. Prospect for rowen poor. Apples one-third of a crop. Corn and potatoes about half a crop. Pasturage in very poor condition. Oats about an average crop.

Falmouth (D. R. WICKS). — Very little rowen. What few apples there are are mostly Baldwins. Potatoes about half a crop. Both sweet and field corn a fair crop. Pasturage now begins to look well. The tomato worm causes much rot in the fruit. Early and late corn has been much infested by a worm on the ears. Melons are looking well.

Dennis (JOSHUA CROWELL). — No rowen. Potatoes about an average crop. Corn looking well. Pasturage very short. Cranberries have suffered very much from drought in some localities.

Brewster (J. H. CLARK). — The cranberry worm is doing most damage. Prospect for rowen poor. Apple crop does not promise as well as last month. Potatoes promise very fairly. Corn is a good crop. Pasturage very poor, except on low ground. Oat crop about as last year.

DUKES COUNTY.

West Tisbury (WM. J. ROTCH). — Rowen a total failure because of drought. Apples a small crop. Potatoes a fair crop. Corn not up to the average. Pasturage suffering severely from drought. Oats not an average crop. Little rain fell from July 3 to August 26.

NANTUCKET COUNTY.

Nantucket (C. W. GARDNER). — No rowen on account of drought. Potatoes about half a crop. Corn generally not more than half a crop. Pasturage in very poor condition. Most crops are a failure because of drought. The recent rain may help out the turnip crop but the chances are poor.

REPORT ON CRANBERRIES.

*“ The cranberry is supposed to have been so named from the appearance of its bud. Just before expanding into the perfect flower, the stem, calyx and petals resemble the neck, head and bill of a crane, — hence the name, ‘ craneberry,’ or ‘ cranberry.’ ”

There are two prominent and well-known species of this fruit: the small (*Vaccinium Oxycoccus*) and the large or American (*Vaccinium macrocarpon*). The former is found in peat bogs from New England and Pennsylvania to Minnesota, and northward, and is seldom gathered for market. The latter is found in peat bogs, from North Carolina to Minnesota, and everywhere northward, but scarcely westward. The American cranberry is divided, by writers upon this subject, into three varieties: first, the *bell cranberry*; second, the *bugle cranberry*; third, the *cherry cranberry*. Some years ago a variety was discovered on Cape Cod, and called the “ early black.” This has been extensively propagated on the Cape.

The cranberry cannot be successfully cultivated on the “ drift formation,” that is, a soil composed of clay or loam; but must be grown, if grown at all, upon the “ alluvial formation.” The best soil is beach or quartz sand, overlaid by about a foot of turfy peat.

The first attempts at the cultivation of the cranberry in this country were made on Cape Cod, about the year 1820, by Capt. Henry Hall of Dennis. The general cultivation, however, does not date back further than the year 1850.

The following table has been prepared in order to show the development of the cranberry industry: —

* Cranberry Culture. J. J. White.

COUNTIES.	1855.		1865.*			1875.†		1885.	
	Acres.	Value.	Acres.	Bushels.	Value.	Bushels.	Value.	Barrels.	Value.
Barnstable, .	197	\$16,916	1,075	13,324	\$37,816	45,267	\$124,018	55,898	\$315,492
Berkshire, .	-	-	3	25	50	105	324	86	548
Bristol, .	380	12,282	345	5,424	14,225	5,357	13,304	4,156 ² / ₅	21,672
Dukes, .	14	1,297	34	790	2,586	1,875	4,475	927 ¹ / ₃	4,040
Essex, .	370	8,488	196	1,441	4,595	5,275	15,510	5,139	23,482
Franklin, .	9 ¹ / ₈	505	9	103	258	727	1,894	330 ¹ / ₄	1,716
Hampden, .	13 ¹ / ₂	439	4	6	30	340	1,082	305 ¹ / ₂	1,698
Hampshire, .	5	40	10	6	30	189	551	272	1,366
Middlesex, .	2,554 ⁵ / ₈	29,274	782	4,042	11,733	15,489	39,846	12,318	50,512
Nantucket, .	19 ¹ / ₄	1,140	140	52	157	502	1,440	59	261
Norfolk, .	897	30,000	773	4,973	15,522	11,796	28,268	4,826	20,670
Plymouth, .	361 ¹ / ₂	12,099	349	3,318	10,068	11,292	27,252	14,237 ² / ₃	70,657
Suffolk, .	-	-	-	-	-	-	-	-	-
Worcester, .	641 ¹ / ₄	22,720	163	1,663	5,295	11,970	30,149	6,478	28,795
TOTALS, .	5,462 ³ / ₄	\$135,200	3,883	35,167 ¹ / ₂	\$102,365	110,184 ¹ / ₂	\$288,113	105,196 ¹ / ₂	\$540,909

* Premium, 1.57.

† Premium, 1.12.

‡ 11,540 barrels.

§ 36,728 barrels.

In 1855 either the number of acres or the value of cranberries was omitted in the returns of fifteen towns. In 1863 5,176 barrels were raised in Barnstable County, selling for \$51,847.75. In many localities the cranberry crop of 1864 was an entire failure; the town of West Bridgewater returned but 60 bushels, with the remark that they often raised 1,500 bushels. From 1875 to 1885 cranberries fell off over 25 per cent in value, but increased 186.18 per cent in quantity. The value per barrel in 1865 is given as \$8.79, in 1875 as \$7.83, and in 1885 as \$5.15.

In order to obtain all the information possible concerning the outlook for the cranberry crop, a special circular was prepared and sent to every city and town in Norfolk, Bristol, Plymouth, Barnstable, Dukes and Nantucket counties, and to all other towns in the Commonwealth showing by the census of 1885 a production of 50 barrels or over. One hundred and eight returns have been received. Judging by the returns it is evident that the "cranberry section" is confined to Norfolk, Plymouth and Barnstable counties. However, they are cultivated to some extent on the islands and in Bristol, Essex, Middlesex and Worcester counties.

In Dukes County, Cottage City, West Tisbury and Chilmark show 26 acres, with no increase over last year; estimated yield, 1,600 barrels; average crop; good quality;

culture considered profitable; drawbacks, insects and lack of flowage.

Nantucket reports 100 acres; no increase; estimated yield, 400 to 700 barrels; average crop; good quality; culture not considered profitable, owing to want of flowage and lack of help in harvesting.

Returns were received from eight towns in Bristol County, but only Berkley and Acushnet report culture, 25 acres; with no increase; estimated yield, 150 barrels; one-half crop; small, quality good; culture considered profitable in Acushnet; not in Berkley, owing to want of flowage. Some native bogs in Seekonk and Rehoboth.

Returns were received from eight towns in Essex County. Andover, Manchester and Newbury show a cultivated area of $9\frac{1}{2}$ acres, with no increase; estimated yield, 200 barrels; three-fourths crop; good quality; culture considered profitable. Also about 30 acres of natural bogs in Andover and Newbury. Two hundred acres of natural bogs in Georgetown, which promise well this year. They are a source of income, as the only cost is that of gathering. Natural bogs also in Hamilton, Topsfield and Groveland; yield perhaps 100 barrels in Topsfield. About 40 acres in Ipswich, no increase; estimated yield, 75 to 100 barrels; one-fourth crop; good quality; crop considered profitable.

Returns were received from twenty towns in Middlesex County. North Reading reports about 65 acres, no increase; estimated yield, 500 barrels; crop a fair average; quality fair; crop considered profitable; drawbacks, frosts and floods.

Wilmington shows 42 acres, an increase; estimated yield, 3,000 bushels; good quality; culture considered profitable; drawbacks this year, drought and worms. Hopkinton, 75 acres, no increase; estimated yield, 500 barrels; yield average; good quality; drawback, lack of water. Tewksbury, 25 acres of natural bogs; not profitable. Concord, 50 acres; and that water, frosts and insects generally take the crop. Westford, perhaps 25 barrels on old meadows; Ayer, a few wild ones; Acton, 20 barrels this year from natural bogs; average yield; good quality; culture not considered profitable. Reading, perhaps 500 barrels of fair quality on some 100 acres of meadow; yield below average; control

of flowage chief drawback to culture. Some native bogs in Sudbury, with crop varying from none at all up to possibly 200 barrels. Likely to be 75 barrels of good quality gathered from Carlisle meadows this year.

Twelve returns were received from Worcester County. Cranberries cultivated in Blackstone, Sturbridge and Mendon, 55 acres, no increase; estimated yield, 525 barrels; average crop; good quality; culture considered profitable in Blackstone and Sturbridge; fire worm working badly in Blackstone; culture decreasing in Mendon, as latterly sale of berries has been such that many fine bogs have been allowed to grow up to wood. Fifty to 75 acres natural bogs in Harvard; estimated yield, 20 per cent of full yield; quality very fair; considered a source of income. About one acre in Southborough. A few patches of wild cranberries in Douglas; estimated yield, 10 barrels, of fair quality. Estimated yield in Bolton, 75 barrels from natural bogs; three-fourths of full yield; small, on account of drought; crop considered a profitable one.

There are also natural bogs in the four western counties, and some farmers cultivate small beds in wet places. Fifty acres of natural bogs in Greenwich, Hampshire County. Returns also received from New Salem, Leverett, Worthington, Hampden, Tolland and Sandisfield, showing small areas of natural bogs.

Sixteen returns were received from Norfolk County. Small areas in Cohasset, Bellingham, Wellesley, Dover, Medway, Norfolk and Randolph, yielding perhaps 30 barrels to each town. Franklin reports 50 to 60 acres, no increase; estimated yield, 500 barrels, one-half a crop; average quality; considered fairly profitable. Medfield, 100 acres, no increase; yield below average; considered moderately profitable; drawbacks, frost, insects and floods. Wrentham, 25 acres, no increase; estimated yield, 50 barrels; yield a good average; fair quality; considered a source of profit. Foxborough, 12 acres, no increase; estimated yield, 625 barrels; yield an average; fair quality; considered profitable; general drawback, lack of flowage.

Eighteen returns were received from Plymouth County. Cultivation limited in Hingham and Brockton. Perhaps 50 barrels this year in Hingham; quality good. Some native

bogs in Abington and Rockland. Marion, 42 acres ; increase over last year of 10 ; estimated yield, 640 barrels ; three-fourths crop ; berries small ; crop considered profitable. Pembroke, 40 acres ; an increase ; estimated yield, 2,000 barrels ; average crop ; quality very good ; culture has been a decided success. Plymouth, 416 acres ; an increase ; estimated yield, 16,000 barrels ; yield 30 per cent off ; berries rather small ; culture considered profitable ; drawbacks this year, drought, span, vine and fruit worms. Wareham, 300 acres, an increase of 80 acres ; estimated yield, 10,000 barrels ; yield two-thirds of a full crop ; quality good ; considered profitable ; insects have done more damage than usual this year. West Bridgewater, 11 acres, 5 of which are cultivated ; estimated yield, 150 barrels on cultivated and 15 barrels on other ; yield nearly an average ; quality good, but berries rather small ; crop considered profitable. There are a number of bogs making in Halifax, although no berries are now produced there. Lakeville, 20 acres, no increase ; estimated yield, 200 barrels ; two-thirds crop ; fair quality ; crop considered profitable. Middleborough, 150 acres, increase of 10 acres ; about one-half crop ; very good quality ; considered profitable, and new bogs being put in all the time ; a late frost killed some blooms, and span and fire worms destroyed a good many. About 10 acres in Kingston, increase of one acre ; estimated yield, 700 barrels ; an extra good yield ; quality good ; no drawbacks to culture yet. Carver, 900 acres ; increase of 40 acres ; estimated yield, 19,000 barrels ; four-fifths crop ; quality good ; crop considered profitable ; drawbacks this year, frosts in June, dry, hot weather and insects. Owing to the dry, hot weather during the latter part of July and August, the fruit did not set well and will be smaller than usual. The span worm has worked more here than ever before.

Fourteen returns were received from Barnstable County. In Harwich the crop will be above average ; berries small ; culture considered profitable ; vine worms drawback this year. Chatham, 30 acres, some increase ; estimated yield, 475 barrels ; three-fourths full yield ; quality good, berries rather small ; culture considered profitable ; fire worm drawback this year. Perhaps 40 acres in Truro, no increase ;

estimated yield, 350 barrels; quality fairly good; culture considered profitable, and has taken a new start. Yarmouth, 300 acres, an increase of perhaps 25 acres; estimated yield, 5,000 barrels; one-half or two-thirds as many as last year; quality fairly good; culture considered profitable; drawbacks, worms and early frosts. About 350 acres in Brewster, an increase; estimated yield, about 4,000 barrels; nearly an average crop; quality fair; culture considered profitable; fruit worm eating badly. Sandwich, 180 acres, 50 of which are not in fruit, an increase; estimated yield, 4,300 barrels; two-thirds crop; berries much smaller than last year; culture considered profitable; the very hot and dry summer has caused the early fruit to rot, and has also made the berries small; berry worm also eating badly in some bogs. In Falmouth some bogs are full of berries, while others are not. A great many acres have been put in this year; about one-half crop; berries very small; culture considered profitable. Provincetown, 123 acres, no increase; estimated yield, 20 barrels; good quality; culture not considered profitable; unable to flow bogs; fire worms particular drawback this year. About 206 acres in Bourne, no increase; estimated yield, 2,500 barrels; one-half crop; very good quality; culture considered profitable. Late frosts did much damage when the berries were setting. Wellfleet, 60 acres, nearly half new bogs, increase of 2; estimated yield, 150 barrels; two-thirds crop; berries small; crop not considered profitable; general drawback, lack of care; this year, dry weather. Eastham, 50 acres, an increase; estimated yield, 250 barrels; crop a little short; good quality; crop considered profitable. Dennis, 300 acres, slight increase; estimated yield, 4,000 barrels; about two-thirds crop; good quality, but berries small; crop considered profitable; drawbacks, insects, especially fire worms. Barnstable, 650 acres, slight increase; estimated yield, 6,500 barrels; average yield; berries rather small; crop considered profitable; drawbacks, fire worms, frost and drought.

MASSACHUSETTS
CROP REPORT

FOR THE

MONTH OF SEPTEMBER, 1892.

ISSUED BY

WM. R. SESSIONS,
SECRETARY STATE BOARD OF AGRICULTURE.

BOSTON:

WRIGHT & POTTER PRINTING CO., STATE PRINTERS,
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1892.

CROP REPORT FOR THE MONTH OF SEPTEMBER, 1892.

OFFICE STATE BOARD OF AGRICULTURE,
BOSTON, MASS., Oct. 1, 1892.

Bulletin No. 5, Crop Report for the month of September, is herewith presented. Attention is called to the discontinuance, with No. 24, Oct. 4, 1892, of the weekly Crop Reports which have been issued in co-operation with the New England Weather Service. A monthly report will be issued for October, and in connection therewith will be a notice of an intended revision of our mailing list before another season.

TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

[FROM UNITED STATES WEATHER-CROP BULLETINS.]

Week ending August 29. — Week cooler than usual from the Mississippi River westward to the Pacific coast, except along the Gulf coast, in the Rio Grande valley, and from northern California northward. East of the Mississippi it was warmer than usual, except in New England. More than the usual amount of rain has fallen over the greater portion of the country east of the Rocky Mountains. The rains of the past week have to a great extent broken the droughts which prevailed.

Week ending September 5. — Weather generally cooler than usual. Light frosts occurred in Colorado, Wyoming, South Dakota, northern Nebraska, northern Iowa, Minnesota, Wisconsin, and in portions of New England, inflicting but slight damage. A killing frost was reported from North Dakota and a black frost from northern Montana. General deficiency in rainfall except in the upper Ohio valley, north of the upper lake region, and in a belt from south-central Texas northward to southern Kansas.

Week ending September 12. — Week cooler than usual on the central and southern California coasts and generally in all districts east of the Rocky Mountains. Frost occurred in the upper Mississippi, Missouri and Ohio valleys, New England, etc., but no serious injury done. Freezing temperature prevailed in Wyoming and northern Montana on the 11th. More than the usual amount of rain in the upper Mississippi and lower Missouri valleys, over Arkansas, Louisiana and eastern Texas, and along the Atlantic coast from North Carolina southward ; also in the Dakotas. Almost total absence of rain elsewhere. Severe drought continues throughout Maryland.

Week ending September 19. — Week warmer than usual in New England, the eastern slope of the Rocky Mountains, the plateau regions and on the north Pacific coast. Over the regions from the central Mississippi and Ohio valleys southward to the Gulf the week was decidedly cooler than usual. Slight frosts have occurred throughout the upper Mississippi and Missouri valleys and in New England. Practically no rain fell during the week over the region from the Mississippi River to the Pacific coast. Over the greater portion of the country eastward of the Mississippi there was more than the usual amount of rain.

Week ending September 26. — Week warmer than usual throughout nearly the entire country. Slight frosts in northern New York on the 20th and in northern Illinois on the 26th. So far this season the injury from frost has been comparatively slight. Very little rain except on portions of the Atlantic coast, lake regions and on the north Pacific coast. Moderate rains are needed for fall ploughing and seeding.

NEW ENGLAND WEATHER AND CROPS.

[FROM UNITED STATES WEATHER-CROP BULLETINS.]

Week ending August 29. — Temperature and sunshine below, and precipitation very heavy ; rain, with high winds accompanying, did slight damage to corn, potatoes, tobacco, fruit, etc. Cranberries reported half crop in Plymouth County, Mass. ; a few fields of potatoes rusting and rotting.

Week ending September 5. — Temperature and precipitation below, and sunshine average; favorable week; light frosts injured vines on lowlands on the 2d and 3d, no serious damage done; tobacco mostly cut, an excellent crop; cranberries promising well; fall feed and rowen good.

Week ending September 12. — Temperature and precipitation below average and sunshine above; fine weather for ripening crops and harvesting; grain average yield; apples above average in northern States, below in southern; cranberry picking begun; corn being cut, an extra good crop.

Week ending September 19. — Temperature and sunshine above; precipitation above, except in central Vermont and eastern Maine; some damage to standing corn in Connecticut by high winds on the 14th; excellent weather for all harvesting, which is progressing rapidly.

Week ending September 26. — Temperature above, sunshine normal and precipitation below; no damage by frost; all crops being harvested in prime condition except potatoes, which are very light and rotting; cranberries good crop.

MASSACHUSETTS CROPS.

In the circular to correspondents returnable on or before September 30, the following questions were asked:—

1. How does the crop of Indian corn compare with an average crop?
2. Is rowen proving to be an average crop?
3. Has the average amount of fall seeding been done, and what is its present condition?
4. Is the onion crop an average, and if not, what were the drawbacks?
5. Are potatoes an average crop in yield and quality?
6. What is the prospect for root crops?
7. How has the apple crop turned out?
8. Has the tobacco crop proved satisfactory, and how is it curing?

Returns have been received from 115 correspondents, from which returns the following summary has been made : —

INDIAN CORN.

A majority of the returns indicate that the crop is a full average, while a number give it as above the average. A few, particularly in eastern sections, refer to it as being below the average. Some complaint comes from Barnstable County of injury to the ears by worms boring into them. The crop, generally, has been secured in excellent condition. It is estimated that the crop will be not less than 2,250,000 bushels, valued at \$1,800,000.

ROWEN.

In the central and western counties the crop of rowen has proved to be a full average crop, and a number of correspondents report it to be above the average. The correspondent in South Hadley Falls writes that "rowen has doubled on many pieces since September 1." In Essex County and in south-eastern sections the crop is below an average, and some correspondents report no rowen at all, owing to dry weather.

FALL SEEDING.

Generally speaking, an average amount of fall seeding has been done, and it is now looking very well. Some correspondents report a larger amount of fall seeding than usual.

ONIONS.

Correspondents sending returns of the onion crop are about evenly divided in their opinion as to whether the crop is an average or below an average. Two correspondents in Franklin and Worcester counties refer to the crop as above an average. The drawbacks given are blight, maggots, drought, poor seed and wet weather in June. Some complaint is also made of blowing away of seed by wind.

POTATOES.

Correspondents are about evenly divided in reporting this crop as either below an average, three-fourths, two-thirds or

one-half of a crop. A large number of correspondents refer to the quality as good or fair. Some complain of potatoes rotting, particularly in the western part of the State. A correspondent in Worcester County writes of many fields being "all rotten." The rot does not appear from the returns to be of a general character, but to be confined to localities or spots.

ROOT CROPS.

Most of the correspondents refer to the prospect for root crops as being either average, good or fair.

APPLES.

Quite a number of correspondents refer to the crop as better than was expected earlier in the season. A number speak of it as very good, others as fair. Many, however, refer to it as either below an average, two-thirds, one-half, light or very small. A number state that high winds the last week in September blew off very many apples, particularly in the central and western sections. It is thought that the quality, as a whole, is a full average, and that the total crop will be much larger than has been expected.

TOBACCO.

Correspondents in the four western counties where tobacco is grown report the crop as satisfactory in yield and quality, and that it is curing well. The census of this crop recently made and published by the "New England Homestead" shows a material increase both in acreage and the number of growers; while the sales show that the tobacco market is fully sustained.

CRANBERRIES.

Since the publication of Crop Bulletin No. 4,* the following returns have been received in response to our circular letter. Sturbridge (Worcester County) reports about five acres; no increase; estimated yield, thirty barrels; fair quality; crop not considered profitable. North Reading (Middlesex County), about sixty-five acres; no increase; estimated yield, five hundred barrels; crop a fair average; quality fair; crop considered profitable; drawbacks this year, early

*Report on Cranberries, pp. 22-27.

frosts and heavy rains. Ipswich (Essex County), forty acres; no increase; estimated yield, seventy-five to one hundred barrels; one-fourth of a crop; good quality; considered a profitable crop, as most of the cranberries grow on sea-shore sand. Westport (Bristol County), thirty acres; no increase; estimated yield, one hundred and fifty barrels; one-fourth crop; berries small; crop not considered very profitable, owing to vine worms.

The following returns have been received from Plymouth County. Duxbury, about one hundred and twenty-five acres; no increase; estimated yield, five thousand barrels; yield very small, but fruit of extra quality; crop considered profitable if properly handled; general drawbacks, fire, span and fruit worms. East Bridgewater, four and one-half acres; increase of one-half an acre; estimated yield, forty-five barrels; quality excellent; crop a new one, and is considered profitable. Hanover, twenty-five acres, no increase; estimated yield, eight hundred and fifty barrels; about one half a crop; good quality; crop considered profitable. Mattapoisett, ten acres; no increase; estimated yield, one thousand barrels; crop above average; berries in good condition and ripening early; crop considered very profitable; lack of capital chief drawback. Rochester, four hundred and fifty acres, an increase; estimated yield, four thousand barrels; yield averages with last year; good quality, but berries small; crop considered profitable; a number of large bogs owned by non-residents.

A consolidation of the returns received from one hundred and twenty towns shows a total of 5,850 acres, an estimated yield of 100,820 barrels, and that the crop is about three-fourths of an average crop. The estimated value of the crop is \$650,000. Of the total acreage, 2,300 acres are in Barnstable County and 2,600 in Plymouth County. The acreage in both counties is an increase over last year. The crop of Barnstable County is given as 27,500 barrels and the crop in Plymouth County as 67,100 barrels. The berries this season average small in size, but of generally good quality. The chief drawbacks to the culture have been due to the ravages of the fire, span and fruit worms, drought, rot in the berry, frost and want of facilities for flowage.

OTHER CROPS.

In Hampden and Templeton green cabbage worms are injuring many pieces of cabbage. Templeton, very light crop of pears, and grapes are dropping badly. Goshen and Pelham, a good yield of wild grapes. Montague, quinces abundant. Agawam, peaches have done nicely. Westford, peach crop very profitable and some orchards remarkable. Medfield, prices of butter better than last year; milk scarce. Dalton, silos gaining in favor, and more ensilage than Indian corn grown. Rutland, ensilage very good and a large amount grown. Wareham, weather very favorable for cranberry picking.

MASSACHUSETTS WEATHER.

Meteorological Data for September, 1892.

[Furnished by New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Cloudy.	Partly Cloudy.	Cloudless.
Monroe, .	55.3	77	25	31	28	2.66	3	—	7	6	13
Springfield, .	62.6	80	19	39	30	1.89	5	S.	5	12	13
Royalston,* .	59.1	80	25	42	21	1.50	4	—	7	4	19
Fitchburg,* .	58.5	76	19, 25	41	29	1.75	5	W.	5	4	21
Worcester, .	62.0	80	19	42	30	1.74	5	S. W.	6	17	7
Dudley, .	60.4	81	5	42	30	2.58	8	—	—	—	—
Framingham, .	60.4	80	19	34	30	2.59	4	—	—	—	—
Concord, .	58.6	78	5, 19	36	29, 30	2.80	6	—	—	—	—
Lowell, .	61.5	84	19	36	30	1.97	4	N. W.	3	18	9
Boston, .	62.5	80	19	46	11	1.90	8	S. W.	6	3	21
Taunton, .	61.0	83	5	33	30	2.87	6	N. W.	6	11	13
New Bedf'd, .	60.4	75	5, 28	35	21	3.54	9	—	—	—	—
Hyannis,* .	65.4	81	25	44	21	2.06	7	S. W.	4	8	18
Provincet'n, .	62.6	75	28	44	21	2.21	6	S. W.	—	—	—

* Data from thermometer not self-registering.

Summary.

Temperature (F.).—Monthly mean, 60.7°; highest mean, 65.4°, at Hyannis; lowest mean, 55.3°, at Monroe; maximum, 84°, at Lowell, on the 19th; minimum, 31°, at Mon-

roe, on the 28th; range, 53° ; greatest local monthly range, 50° , at Taunton; least local monthly range, 31° , at Provincetown; greatest daily range, 41° , at Taunton, on the 30th; least daily range, 6° , at Hyannis and Provincetown, on the 14th. Average temperature for September at Boston for twenty-two years, 62.3° ; average for September, 1892, 62.5° ; departure, $+0.2^{\circ}$. Average at Springfield for twenty-five years, 62.9° ; average for September, 1892, 62.6° ; departure, -0.3° . Average at New Bedford for eighty years, 59.4° ; for September, 1892, 60.4° ; departure, $+1.0^{\circ}$.

Precipitation. — Average, 2.29; greatest, 3.54, at New Bedford; least, 1.50, at Royalston. Average at Boston for twenty-two years, 3.06; total for September, 1892, 1.90; departure, -1.16 . Average at Springfield for forty-five years, 3.51; total for September, 1892, 1.89; departure, -1.62 . Average at New Bedford for seventy-nine years, 3.52; total for September, 1892, 3.65; departure, $+0.13$.

Prevailing wind. — South-west.

Thunder-storms. — 19th, 26th.

Frosts. — Monroe, 8th (light), 20th, 29th, 30th; Concord, 30th; Royalston, 2d, 7th, 21st, 30th; Taunton, light on 2d, 3d, 4th, 7th, 8th, 9th, 11th, 12th, 13th, 16th, 17th, 20th, killing on 21st, 22d, 30th; Worcester, 28th, 29th.

Meteor. — Worcester, 20th, 8.03 P.M., in north-west.

Auroras. — 26th, South Royalston; 1st, 21st, Taunton.

REMARKS.

The month of September, 1892, had in Massachusetts very nearly a normal temperature, a deficiency of rainfall except in the vicinity of New Bedford, and an air pressure and amount of sunshine above the average. Few storms influenced the weather, it being controlled during the greater part of the time by anti-cyclones or fair weather areas. At Boston twenty-one days were recorded as cloudless during the month. At Blue Hill the amount of sunshine was 60.3 hours more than the average for seven years; at that station there was only one day with no sunshine.

The highest temperature occurred on the 19th, ranging

slightly over 80° . The lowest was on the 21st or 30th, and was very near the freezing point of water. Thus, while the monthly range was not large, the daily ranges were very strong and generally rapid. While at Taunton light frosts are reported on twelve days and killing frosts on three, at Fitchburg no frost had occurred at the end of the month. Over the greater part of the State the damage by frosts was very slight. In this respect the season has been unusually favorable, both during the late spring and the early fall.

At New Bedford the rainfall was over three inches; two inches and over fell in the south-eastern part of the State and in the extreme west, while from one to two inches only was registered in all the central districts. Thunder-storms were few, but that of the 26th was very severe and did considerable damage. The correspondent from Taunton reports that a sudden severe thunder-storm on that morning caused an alarm of fire, and did considerable damage. Over thirty telephones were damaged, and some six or eight buildings struck by lightning, some being badly damaged by fire. No people were seriously injured, although several narrow escapes happened. The clouds were reported as a dark bluish-black, with a rolling motion at the upper edge. One gentleman thought the storm was moving at the rate of a mile a minute.

OCTOBER WEATHER.

The following is compiled from the records at Boston for twenty-one years. The mean temperature is 52° ; the warmest October was in 1879, with an average of 56° , and the coldest that of 1883, with an average of 47° . The highest temperature during any October was 90° on the 1st in 1881, and the lowest was 25° on the 26th in 1879.

The average precipitation for the month is 4.12 inches, and the average number of rainy days ten. The greatest monthly precipitation was 8.84 in 1877, and the least 0.91 in 1879. The greatest amount of precipitation recorded in any twenty-four consecutive hours was 4.22 inches, on the 11th and 12th, in 1871. The prevailing wind is from the west, and the highest velocity fifty-four miles an hour from the north-east on the 19th in 1890.

NOTES OF CORRESPONDENTS.

(Returned to us September 30.)

BERKSHIRE COUNTY.

Sandisfield (G. A. SHEPARD). — Indian corn rather more than an average crop. Rowen an average crop. But little fall seeding done. Few onions raised, but those a fair average. Potatoes about sixty per cent of an average crop; quality very good. Prospect for root crops good. Apples a light yield. Little tobacco raised, but that a satisfactory crop. Enough has been raised to prove that good tobacco can be grown in this town.

Sheffield (DWIGHT ANDREWS). — Indian corn more than an average crop. Rowen an average crop. Average amount of fall seeding done; present condition good. Onion crop not up to the average. Potatoes not an average crop. Prospect for root crops good. Apples not an average crop. Tobacco a good crop.

Lee (A. BRADLEY). — Indian corn a little more than an average crop. Rowen an average crop. Not as much fall seeding as usual done; present condition good, except on old meadows. Potatoes not an average yield; quality excellent. Prospect for root crops very good. Apple crop much below the average. Tobacco a satisfactory crop, and curing well.

Richmond (O. F. SMITH). — Indian corn above an average crop. Rowen an average crop. Average amount of fall seeding done, present condition very good. Potatoes not up to the average in yield or quality. Prospect for root crops very good. Apples not a very good crop.

Becket (WM. H. SNOW). — Indian corn a full average crop. Rowen an average crop. Fall seeding in good condition. Onions not an average crop, because of maggots and wet weather. Potatoes not an average in yield or quality; some pieces badly rotted. Good prospect for root crops. Apples a very light crop, but better than expected.

Dalton (W. B. BARTON). — Indian corn a good crop. Rowen an average crop, and mostly secured in good condition. Average amount of fall seeding done, and looking well. Potatoes three-

fourths crop ; quality not good, and rotting somewhat. Prospect for root crops good. Apple crop better than was expected. Ensilage has been secured in good shape, and silos are gaining in favor. Fall work is well along.

FRANKLIN COUNTY.

Charlemont (H. S. GILES). — Indian corn a full average crop. Rowen not quite up to the average, but very fair. Average amount of fall seeding done ; present condition good. Potatoes an average yield ; quality excellent. Prospect for root crops very good. Apples quite a good crop, and selling at \$1.25 and \$1.50 per barrel. Tobacco a very large crop, and curing nicely. General outlook favorable.

Colrain (A. A. SMITH). — Indian corn an average crop. Rowen an average crop. Average amount of fall seeding done. Potatoes not up to the average. Prospect for root crops good. Apple crop better than was expected. Tobacco a satisfactory crop, and curing well.

Whately (FRANK DICKINSON). — Indian corn not an average crop. Rowen an average crop ; very heavy on new ground. Fall seeding coming up well, but needs rain. Onions not an average crop, because of blight. Potatoes not an average yield ; quality good. Apples about a two-thirds crop. Tobacco a very heavy crop, and curing very well.

Sunderland (W. L. WARNER). — Indian corn and rowen more than an average crop. Full average amount of fall seeding done, and looking well. Onion crop not as large as last year ; seed did not come up as well, and crop cured early. Not half a crop of potatoes, and few apples. Tobacco crop large, and curing finely.

Northfield (CHAS. POMEROY). — Indian corn a full average crop. Rowen better than usual, though a little late. Average amount of fall seeding done, but too early to give results. Onions not up to the average, because of maggots. Potatoes a two-thirds crop ; quality good. Root crops promise to be an average. Apples more than an average crop. Tobacco a very fine growth, and curing well.

Montague (C. S. RAYMOND). — Corn crop above the average. Rowen rather below an average crop. Not so much fall seeding done as last year, condition fair. Onion crop better than the average. Potatoes about half a crop and not up to average in quality. Apples about a medium crop. Tobacco a satisfactory crop and curing nicely. Quinces abundant.

New Salem (DANIEL BALLARD). — Indian corn better than an average crop. Rowen an average crop. Little fall seeding done. Potatoes below the average in yield and quality. Prospect for root crops about average. Apple crop rather light.

HAMPSHIRE COUNTY.

Enfield (D. O. CHICKERING). — Indian corn compares favorably with an average crop. Rowen an average crop. Fall seeding in good condition. Potatoes a light yield but quality good. Prospect for root crops good. Apples about half a crop, very uneven.

Amherst (WM. P. BROOKS). — Indian corn a full average crop. Rowen above the average. Should say less than the average amount of fall seeding has been done, on account of work on tobacco. When sown, condition good. Onions not an average crop, because of mildew and poor seed. Potatoes hardly an average crop. Prospect for root crops good. Apple crop lighter than last year, but still a fair crop. Tobacco crop very satisfactory, and generally curing well.

Northampton (D. A. HORTON). — Indian corn fully up to the average. Rowen an average crop. More than the usual amount of fall seeding done, and looking well. Potatoes poor in yield and quality. Prospect for root crops good. Apple crop not gathered yet, but think it light. Tobacco crop very good, and curing in good shape; some growers have already taken a little from the poles. Onions not more than a three-fourths crop, on account of the dry, windy weather in April and May.

Westhampton (W. H. LYMAN). — Indian corn better than an average crop. Rowen an average crop. Average amount of fall seeding done. Potato crop not up to the average. Prospect for root crops good. Apples about half a crop. Tobacco a satisfactory crop, and curing well.

Southampton (C. B. LYMAN). — Indian corn fully up to the average. Rowen an average crop. Average amount of fall seeding done; present condition good. Onions a fair crop, though many did not mature. Potatoes not an average crop; quality fair. Prospect for root crops good. Apple crop better than was expected. Tobacco a very fine crop, and curing well.

Goshen (ALVAN BARRUS). — Indian corn a full crop. Rowen hardly an average crop. Average amount of fall seeding done; present condition good. Onions an average crop, no drawbacks. Potatoes not more than half a crop in yield and quality. Prospect for root crops fair. Apples about half a crop.

HAMPDEN COUNTY.

Tolland (F. T. MOORE).—Indian corn a fair crop, but late. Rowen fully up to the average; grass growing finely now. Onions about as usual. Potatoes about one-fourth crop, and rotting badly. Root crops not up to the average, because of wet weather. Apples not one-fourth of a crop, and not very fair. Tobacco crop very good, and curing well. Feed in pastures as green and fresh as in June. No frosts yet.

Agawam (R. DEWITT).—Indian corn more than an average crop. Rowen more than an average crop. Less than the usual amount of fall seeding done; looking finely. Potatoes not an average crop. Turnips are looking well. Apples a poor crop in quantity and quality. Tobacco a satisfactory crop. Peaches have done nicely.

West Springfield (N. T. SMITH).—Indian corn an average crop. Rowen above the average. Not quite the usual amount of fall seeding done; present condition good. Onions an average crop. Potatoes not up to the average. Prospect for root crops fairly good, though some pieces of carrots have blighted. Apples about sixty per cent of a crop, mostly Baldwins; some orchards very heavy, others none. Tobacco a satisfactory crop.

Holyoke (J. C. THORPE).—Indian corn about ten per cent better than an average crop. Rowen about an average crop. Fully the average amount of fall seeding done, and looking well. Potatoes about a two-thirds crop; quality good. Root crops looking well. Apples about a two-thirds crop; quality very fair.

Chicopee (R. W. BEMIS).—Indian corn fully up to the average. Rowen a good crop. Not the usual amount of fall seeding done at the present time. Onions an average crop. Potato crop below the average. Prospect for root crops good. Apples quite a good crop, but a great many have blown off. Tobacco a satisfactory crop, and curing well.

Wilbraham (H. M. BLISS).—Indian corn a good crop. Rowen an average crop. Average amount of fall seeding done; present condition good. Potatoes a three-fourths crop; quality good. Prospect for root crops good. Apples a light crop. Fall feed good. Excellent weather has allowed late-planted crops to ripen.

Hampden (JOHN N. ISHAM).—Indian corn a full average crop. Rowen an average and more on many fields. Hardly the average amount of fall seeding done, but it is looking well. Onion crop below average, because of wet weather in June. Potatoes not over three-fourths of an average; quality very good. Good prospect for root crops; tops green and still growing. Apples not half a

crop; comparatively few trees bearing well. Tobacco has done finely, curing fast and well. Green cabbage worms are injuring many fields of cabbage.

Brimfield (S. W. BROWN).—Indian corn not so good as last year by ten per cent. Rowen an average crop. Average amount of fall seeding done, and condition good. Potatoes not over two-thirds of an average yield, but quality good. Poor prospect for root crops. Apples not half a crop. No frost as yet. Fall feed first class.

WORCESTER COUNTY.

Southbridge (G. L. CLEMENCE).—Indian corn a little above an average crop. Rowen more than an average crop. Usual amount of fall seeding done, and looking well. Potatoes a small yield, and late potatoes rot badly. Apple crop twenty per cent above the average.

West Brookfield (L. H. CHAMBERLAIN).—Indian corn a full crop. Rowen an average crop. Not the average amount of fall seeding done; present condition good. Potatoes not an average crop; many fields completely destroyed by rot. Root crops promise well. Apples promised a three-fourths crop, but the recent high winds blew half of them from the trees.

North Brookfield (J. H. LANE).—Indian corn more than an average crop; during the past two weeks the fodder has suffered from rust. Rowen hardly an average crop, owing to dry weather. Average amount of fall seeding done; present condition good. Potatoes not quite an average yield; quality good, some rot. Mangolds fair; Swedes not good. Apples a light crop. Cranberries of extra quality, but crop light.

New Braintree (CHAS. D. SAGE).—Indian corn a full crop. Rowen better than was expected, but hardly an average crop. Very little fall seeding done yet. Potatoes about a three-fourths crop; quality fair. Apples about half a crop of fair quality. The high wind of the past week blew apples off badly. Pastures are fresh and stock is doing well.

Oakham (JESSE ALLEN).—Indian corn a full crop. Rowen an average crop. Very little fall seeding done, but that done is looking well. Potatoes a three-fourths crop. Prospect for root crops fair. Apples half a crop.

Barre (J. L. SMITH).—Indian corn ten per cent better than the average. Rowen an average crop. Average amount of fall seeding done; looking well. Potatoes not an average in yield, but quality good. Apple crop nearly up to the average.

Petersham (S. B. COOK).—Indian corn better than an average crop. Rowen an average crop. Average amount of fall seeding

done; the catch appears to be good. Potatoes not up to the average in yield; quality fairly good. There will be a large root crop. Apple crop fairly good, though much smaller than last year.

Westminster (JOSEPH HAGER). — Indian corn above an average; ripened well. Rowen more than an average crop. Average amount of fall seeding done; present condition good. Potato crop very light and generally poor. Prospect for root crops good. Winter apples were never better. Potatoes that matured early were a light crop; those that matured late were a large crop, but badly rotted.

Leominster (W. B. HOSMER). — Indian corn a good average crop. Rowen an average crop. More than the usual amount of fall seeding done; present condition favorable. Onions not an average crop, because of blight and maggots. Potatoes a three-fourths crop; quality more than average. Winter apples more than an average crop.

Lancaster (S. C. DAMON). — Indian corn an average crop. Rowen a three-fourths crop, on account of dry weather. Average amount of fall seeding done, but not looking as well as usual. Potatoes not an average in yield or quality. Prospect for root crops fair. Apples a good crop.

Harvard (PRESTON KNIGHT). — Indian corn about an average crop. Rowen rather better than an average. Small amount of fall seeding done; present condition favorable. Potatoes less than a three-fourths crop. Root crops promise well. Apples very large, and usually of excellent quality. The weather has been very favorable for fall work.

Bolton (H. F. HAYNES). — Some fields of Indian corn on light land were injured by drought, but generally the crop is heavy. Rowen more than an average crop. Average amount of fall seeding done, and looking finely. Onions not quite an average, because of poor seed. Potatoes not half a crop. Root crops poor, because of drought. Apples a good crop.

Rutland (A. L. MILES). — Indian corn better than an average crop. Rowen about an average. Average amount of fall seeding done; present condition good. Early potatoes very good, late ones nearly a failure. Fall turnips doing nicely. Winter apples promise well in quantity, but quality rather poor. Weather has been remarkably favorable for filling silos. No frosts as yet.

Southborough (E. F. COLLINS). — Indian corn eighty per cent of an average crop. Rowen more than an average crop. More than the usual amount of fall seeding done; good catch but needs rain.

Potatoes rather a light yield, quality good. Apples not more than half a crop, small and knurly.

Oxford (D. M. HOWE). — Indian corn a good crop. Rowen an average crop. About the usual amount of fall seeding done. Onions more than an average crop. Potatoes a good average crop. Prospect for root crops fair. Apples very good quality.

Douglas (T. M. POTTER). — Indian corn fully an average crop. Average amount of fall seeding done; that sown early is coming up. Potatoes not more than half a crop. Prospect for root crops good. Apples a fair crop.

Upton (B. A. JOURDAN). — Indian corn a very good crop. Rowen an average crop. Average amount of fall seeding done, and looking well. Onion crop an average. Potatoes a light yield, with considerable rot. Apple crop better than was expected. Apples selling for \$1.25 per barrel.

MIDDLESEX COUNTY.

Hopkinton (W. V. THOMPSON). — Indian corn more than an average crop. Rowen an average crop. Average amount of fall seeding done; present condition good. Onions an average crop. Potatoes an average in yield and quality. Fair prospect for root crops. Apples a fair crop. No frost as yet; fields looking green.

Ashland (A. R. STEVENS). — Indian corn a much better crop than usual. Rowen has been very light, owing to dry weather in July. Onions about an average crop. Potatoes an average yield, and quality better than usual. Prospect for root crop very good. Winter apples are a small yield, but large and extra fair. A high wind on September 26 and 27 blew a great many from the trees.

Framingham (H. S. WHITTEMORE). — Indian corn fully an average crop. Rowen more than an average crop, and cured in good condition. More than the average amount of fall seeding has been done, but it is backward, because of dry weather. Onions a three-fourths crop, because of dry weather. Potatoes a three-fourths crop; quality good, but size small, and they are rotting some. Good prospect for root crops. Apple crop better than was expected. Prices for all crops have ruled higher than last year.

Marlborough (E. D. HOWE). — Indian corn about as usual. Rowen an average crop. Average amount of fall seeding done; present condition good. Onions ninety per cent of a crop, owing to dry weather. Potatoes ninety per cent of an average crop; quality good. Roots promise to be a full average. Apples a full crop, of good quality.

Weston (H. L. BROWN). — Indian corn a good average crop. Rowen not up to the average. Not as much fall seeding as usual done; looking well on low land. Potatoes half a crop, of good quality. Prospect for root crops good. Apple crop better than was anticipated. Market crops have sold well, with fair yields.

Newton (OTIS PETTEE). — Indian corn a fair average crop. Rowen better than for several years. Little fall seeding done as yet, but ground is being prepared. Satisfactory yield of Baldwins and Greenings.

Winchester (MARSHALL SYMMES). — Rowen about seventy-five per cent of an average crop. Potatoes not an average crop. Scarcely any onions grown. Short crop of winter beets. Apple crop below the average. The crops taken all together will not amount to more than seventy-five per cent of last year's yield.

Concord (W. H. HUNT). — Indian corn a full crop. Rowen an average crop. Average amount of fall seeding done, and looking well. Onion crop a little below average. Potatoes below average in yield; quality good. Prospect for root crops fair. Fall apples abundant, but have dropped off badly.

Groton (DANIEL NEEDHAM). — Indian corn a good crop. Rowen more than an average crop. Average amount of fall seeding done. Potatoes an average in quantity and quality. Prospect for root crops good. Apples a very large crop. The year has been very productive. No frost as yet. Pastures were never so green at this date. Chestnuts and walnuts are very abundant, and both crops are gathered for market.

Westford (ARTHUR WRIGHT). — Indian corn more than an average crop. Rowen an average. Average amount of fall seeding done; present condition good. Potatoes not more than a two-thirds crop, some rot. Root crops promise to be fully an average. Apple crop a very good one. The peach crop has been a very profitable one; some orchards are remarkable.

Chelmsford (P. P. PERHAM). — Indian corn less than half a crop. Rowen an extra large crop, secured in good condition. Average amount of fall seeding done; promises well. Onions more than an average crop. Potatoes not up to the average; quality good. Prospect good for a large crop of almost every kind of roots. Apple crop much better than was expected; Baldwins coloring up better than usual.

ESSEX COUNTY.

Groveland (ABEL STICKNEY). — Indian corn about an average crop, not up to August expectations. Rowen not an average crop. Average amount of fall seeding done, some looking very

finely. Potatoes not an average crop. Root crops promise well. Apples a good crop.

Newbury (GEO. W. ADAMS). — Indian corn a full average crop. Rowen not up to the average. A little early for fall seeding as yet; about an average amount done thus far. Onion crop not up to the average, because of dry weather and maggots. Potatoes an average in quality but not in quantity. Fair prospect for root crops. Apples light, about one-fourth crop; few orchards have a full yield; quality very good and color extra.

Andover (PETER HOLT, JR.). — Indian corn a good average crop. Rowen a very light crop, because of drought. Less than the average amount of fall seeding has been done, and that has not done well, because of drought. Onions an average crop, except on light land. Potatoes not more than half a crop on light land. Poor prospect for root crops. Winter apples a large crop.

Ipswich (O. C. SMITH). — Indian corn about sixty-five per cent of an average crop. Rowen about half a crop. Rather more than the average amount of fall seeding done, present condition good. Onions an average crop. Potatoes about a one-third crop, below average in quality. Growth of roots smaller than usual, a two-thirds crop. Apples about half a crop; trees not sprayed last year have very little fruit. Want of rain has affected all crops more or less this season.

Danvers (C. H. PRESTON). — Indian corn an average crop. Rowen an average crop. Present condition of fall seeding good. Onion crop not up to the average. Potatoes about three-fourths an average yield; quality good. A fair crop of apples in some localities.

Marblehead (W. S. PHILLIPS, JR.). — Rowen an excellent crop on good land, on poor land none. Average amount of fall seeding done; present condition good. Onion crop a full average; acreage small. Potatoes an average crop. Prospect for root crops very fair. Fall apples scarce; winter fruit quite abundant, and of good quality.

NORFOLK COUNTY.

Medfield (GEO. R. CHASE). — Indian corn about eighty per cent of an average; ears do not mature. Rowen twenty-five per cent above average, on moist, strong land. Not the average amount of fall seeding done; condition good. Potatoes not an average crop; the dry weather reduced size and quality. Roots promise an average crop. Apples not much more than half a crop. Prices of butter have been better than last year. Good local

demand for cream. Retailers of milk have been troubled to get a supply.

Millis (E. F. RICHARDSON).—Indian corn below the average. Rowen less than an average crop. More than the average amount of fall seeding done; present condition fair. Potatoes about a two-thirds crop; quality good. Root crops promise to be below the average. Apple crop fair.

Franklin (C. M. ALLEN).—Indian corn more than an average crop. Rowen about seventy-five per cent of full crop. Average amount of fall seeding done; present condition average. Yield of potatoes about sixty-five per cent; quality average. Prospect for root crops below an average. Apples a three-fourths crop.

Medway (MONROE MORSE).—Indian corn nearly a full crop. Rowen not up to the average. Average amount of fall seeding done, and present condition good. Potatoes not over half a crop; quality only fair. Apple crop light; winter apples not yet harvested generally.

BRISTOL COUNTY.

Mansfield (D. E. HARDING).—Indian corn not more than a two-thirds crop. Rowen not half a crop, because of dry weather. Average amount of fall seeding done. Potatoes are of good quality, but not more than a two-thirds yield. Fair prospect for root crops. Apples not an average crop.

Attleborough (ISAAC ALGER).—Indian corn about thirty per cent below an average crop. Rowen a very small crop. Average amount of fall seeding done; present condition good. Yield of potatoes about thirty per cent short; quality good. Prospect for root crops very poor. Apples about one-fourth of a crop.

Raynham (N. W. SHAW).—Indian corn about a three-fourths crop. Rowen crop very light. More than the usual amount of fall seeding done. Potatoes about an average yield, light on dry land and heavy on moist land. Root crops are backward, but promise fairly. Apples about a two-thirds crop, better than expected. Drought has affected all crops, and fall seeding has been delayed by it.

Dartmouth (L. T. DAVIS).—Indian corn an average crop. Rowen not more than a one-fourth crop. Average amount of fall seeding done, and looking finely. Potatoes not an average in yield, but of very fine quality. Prospect for root crops quite good. Ensilage corn very fine. Late rains have given the meadows a good start for next year.

PLYMOUTH COUNTY.

West Bridgewater (F. E. HOWARD). — Indian corn more than an average crop. Rowen not up to the average. Average amount of fall seeding done; present condition good. Onions not an average crop, because of drought. Potatoes not an average yield; quality fair. Root crops hardly an average, on account of dry weather. Apples a poor crop both in quantity and quality.

Hanson (F. S. THOMAS). — Indian corn an average crop. Rowen not up to the average. Average amount of fall seeding done, and present condition good. Onions an average crop. Potatoes a small yield, but quality good. Good prospect for root crops. Apple crop rather small.

Marshfield (G. J. PETERSON). — Indian corn about half a crop. Rowen half a crop. Average amount of fall seeding done, and looking well. Onion crop heavy on the dyked land. Potatoes about half a crop. Root crops promise to be an average. Apples a poor crop. Spring seeding has been badly damaged by the drought, but the low fields are looking finely.

Kingston (J. H. CUSHMAN). — Indian corn fully up to the average. Rowen not half a crop. Little fall seeding done as yet; looking well. Potatoes not more than half a crop; quality good. Root crops looking finely. Apples turning out very well, small but fair. No frost as yet.

Middleborough (C. E. WESTON). — Indian corn a three-fourths crop. Rowen an average crop. More than the average amount of fall seeding done; present condition very good. Onions a three-fourths crop, because of dry weather. Potatoes one-half crop; size small, but fair and smooth. Good prospect for root crops. Apples a very fair crop, and are fair and smooth. Fall feed is very good.

Lakeville (ELBRIDGE CUSHMAN). — The severe drought reduced the crop of Indian corn fully thirty-three per cent. Scarcely any rowen cut. Average amount of fall seeding done; present condition excellent. Onion crop hardly an average, because of drought. Potatoes about one-half a crop; quality good. Prospect for root crops not flattering. Apples a full average crop.

Wareham (A. SAVARY). — Indian corn much below an average crop. Very little rowen, except on low lands. About the usual amount of fall seeding done, and looking well. Onion crop a failure, on account of maggots and drought. Potatoes a small crop; size small, quality good. Prospect for root crops poor. Practically no apples. The weather during September has been very favorable for cranberry picking, and the early berries have been secured in good condition.

BARNSTABLE COUNTY.

Falmouth (D. R. WICKS).—Indian corn about an average crop. Very little rowen cut. Fall seeding about completed. Onions only a two-thirds crop, because of drought. Potatoes a two-thirds crop; quality good. Prospect for root crops good. Apples about a one-third crop; Baldwins the only kind.

Mashpee (W. F. HAMMOND).—Indian corn about an average crop. Rowen is about a failure. Very little fall seeding done. Onion crop small, because of dry weather. Potatoes about a one-third crop, of good quality. Root crops all very light. Apple crop nearly a failure.

Barnstable (JOHN BURSLEY).—Indian corn probably an average crop. Rowen not up to the average. Very little fall seeding done, because of drought. Onion crop very light; the maggots destroyed a number of fields. Potatoes not an average crop. Roots will be small crops; the turnip is the principal root grown; late plantings did not come up. Apple crop very small. The cranberry crop is an average one, and probably three-fourths of the crop is harvested.

Dennis (JOSHUA CROWELL).—Indian corn about an average crop. Rowen not an average. Very little fall seeding done. Onion crop suffered from drought, but is about an average. Potatoes below an average crop. Fair prospect for root crops. Apple crop better than last year, but not quite so good as it promised.

Eastham (J. A. CLARK).—Indian corn would be a good crop but for worms in the ear. Rowen a good crop on low ground. Not much fall seeding done. Potatoes a light crop. Root crops not up to the average; turnips principal crop raised. Apples a light crop.

DUKES COUNTY.

West Tisbury (WM. J. ROTCH).—Indian corn sixty-five per cent of a crop. Rowen a total failure. Average amount of fall seeding done; present condition good. Onions only half a crop, because of severe drought in July and August. Potatoes eighty per cent of a crop; drought injured all but the early planted. Prospect for root crops good. Apples two-thirds of an average crop.

NANTUCKET COUNTY.

Nantucket (CHAS. W. GARDNER).—On light lands Indian corn is about half a crop, on heavy lands very good. Rowen a failure. It has been too dry for fall seeding. Onions about half a crop, on account of drought. Potatoes only half a crop, and quality poor. Prospect for root crops very good.

MASSACHUSETTS
CROP REPORT

FOR THE

MONTH OF OCTOBER, 1892.

ISSUED BY

WM. R. SESSIONS,
SECRETARY STATE BOARD OF AGRICULTURE.

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CROP REPORT FOR THE MONTH OF OCTOBER, 1892.

OFFICE STATE BOARD OF AGRICULTURE,
BOSTON, MASS., NOV. 1, 1892.

Bulletin No. 6, Crop Report for the month of October, is herewith presented. This will be the last issue of the season. Our sincere thanks are hereby extended to correspondents for the interest they have shown and for the returns they have made from month to month. It is hoped this work will be continued another season. Attention is called to the intended revision of our mailing list, of which notice was given last month.

This number concludes the fifth season since the monthly crop reports were instituted. In all twenty-nine bulletins have been issued, and our mailing list increased from four hundred in June, 1888, to about two thousand at the present time. Particular attention is called to the index at the end of this issue.

The special subjects treated this season have been as follows: Bulletin No. 1, Farm Help and Wages, Weather Forecasts; Bulletin No. 2, Frost Warnings; Bulletin No. 4, The Horn Fly, Report on Cranberries.

TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

[FROM UNITED STATES WEATHER-CROP BULLETIN.]

*Week ending October 3.** — Slight but general deficiency in temperature along the Atlantic coast and in the east Gulf States. Over the entire country to the westward of the districts named the week has been warmer than usual. Frost occurred in the Ohio valley on September 27, in New England on the 30th, and generally throughout the lower lake region and Middle Atlantic States on October 2 and 3. The temperature for the crop season now closed has been below

* Discontinued with this issue.

the average over the greater portion of the country, the greatest deficiency occurring in the lower Arkansas and Mississippi valleys, where it has exceeded 2° per day. Along the Atlantic coast north of Virginia, and over the northern districts from Minnesota eastward, the seasonal temperature has been normal or slightly above.

Upon the whole, the week has been exceptionally dry, and at no time since March 1 has there been an absence of rain over so much of the country as during the past week. The warm, dry weather has been exceptionally favorable for the securing of all crops. Corn for the most part has been secured. Fall ploughing has been retarded, but wheat seeding has progressed favorably.

The crop season for 1892, from March 1 to October 3, closes with a general excess of precipitation throughout the Mississippi valley and generally over all northern districts eastward of the upper Missouri valley. In central and western Texas, eastern Maine, and in the States bordering on the Atlantic from Maryland southward, the seasonal rainfall has been below the average, the deficiency in Florida and along the Texas coast ranging at some stations from ten to fifteen inches.

NEW ENGLAND WEATHER AND CROPS.

[FROM UNITED STATES WEATHER-CROP BULLETIN.]

*Week ending October 3.** — Temperature and sunshine normal, precipitation below. An excellent season for all crops except potatoes; harvesting mostly done; high winds damaged fruit trees in north on October 1; cranberries nearly an average crop; apples average in north, below in south.

The report of the Statistician of the United States Department of Agriculture for October, 1892, states that the October returns make the general condition of corn 79.8, against 79.6 for last month. The absence of frost has been very favorable to the ripening of the late and immature areas. The present condition indicates a yield below the average. The crop has ripened well in most northern lati-

* Discontinued with this issue.

tudes and especially so in New England. The report for wheat gives the State averages of yield per acre ranging from $6\frac{1}{2}$ to $22\frac{1}{2}$ bushels and averaging 13 bushels. In the West there appears to be an unusual range of yield and quality, due principally to the excessive moisture of the growing season. The preliminary estimate of yield per acre of oats makes an average of 24.3 bushels per acre, a yield between 2 and 3 bushels below the average for ten years. The season was unfavorable for seeding, owing to continued rains; later the crop suffered from drought, and in many districts rust and blight were added to the destructive agents. The preliminary returns of barley indicate a yield per acre of 23.7 bushels, a rate of 2 bushels below the outturn of last year, but nearly 3 above the low yield of 1890. The condition of rye was reported rather below the average during each growing month of the season; however, the estimated yield of the present year is a little above the normal, being 12.7 bushels per acre. The season has been unfavorable for buckwheat from the beginning, the condition, 85.6, being the lowest October condition since 1888. Cotton has fallen off in percentage of condition since September, due largely to unfavorable weather conditions. The boll worm is most frequently mentioned west of the Mississippi, while the caterpillar has wrought some injury in the Southern belt. The condition of potatoes, which has been low throughout the whole season, shows a further heavy falling off during the past month, the September average of 74.8 declining to 67.7 for the present return. In but two years in the history of crop reporting by the Department, 1887 and 1890, has the final report been lower. The season has been distinctly unfavorable almost from the beginning, especially in the districts of heaviest production.

The weather of September was generally favorable in the tobacco-growing districts, and as a result there is an improvement from 79.9 to 83.5. In the seed leaf districts of the Connecticut valley reported condition is very high.

In Massachusetts the average yield per acre of rye in 1892 is given as 15.2 bushels; of oats, 30 bushels; and of barley, 22.5. Also average condition of buckwheat, October 1, 86; of corn, 97; of potatoes, 77; and of tobacco, 99.

MASSACHUSETTS WEATHER.

January was warmer than the average, and the precipitation was greater than usual in the central counties. The snowfall was deficient; the greater part came on the 6th, and remained on the ground but a few days, giving little protection to grass and grain. The alternate freezing and thawing of the ground probably caused some damage. Snow, ice and bare ground alternated at the end of the month. The prevailing wind was from the north-west. A thunder-storm occurred at Williamstown on the 2d, and distant lightning was seen at Provincetown on the 25th.

February was warm and dry. The precipitation was least along the coast. From eight to twenty-six inches of snow fell in the western part of the State and from one to eight inches in the eastern. Not more than a trace of snow remained on the ground at the end of the month. The prevailing direction of the wind was from the north-west.

March was cool and dry. On the extreme southern Rhode Island and Massachusetts coast the precipitation was above the average, but in other sections it was below. The prevailing wind was from the north-west. Thunder-storms were observed at Hyannis and Mansfield on the 10th, and at New Bedford and Randolph on the 11th.

April was warm and dry. Very little snow fell, and none lay on the ground on the 15th or end of the month. The prevailing wind was from the north-west. A well-marked thunder-storm occurred on the 2d.

The weather for May was characterized by an excess of rainfall and number of rainy days and an unusually high mean wind velocity. The mean temperature was slightly below the average and the monthly range was strong. There was an excess of westerly and northerly winds and less southerly and easterly winds than usual.

The precipitation for the month was greatest in the central and western districts and least on the coast. A remarkably late snow-storm occurred on the 20th. This was felt only on the western highlands, but was severe there as well as in Vermont and New Hampshire.

The weather for June was characterized by a very high

mean temperature, with great variability, especially during the middle of the month; heavy local storms accompanied by thunder and lightning, high winds and hail, prevailing southerly winds and an excess of rainy days.

The mean temperature was from 1° to over 3° above the average throughout the State. The lowest occurred on the morning of the 11th, when considerable damage was done in the eastern districts by frost. From the 11th to the 14th there were very strong ranges of temperature with steadily increasing heat each day, until on the latter date it rose to 90° and over, at all stations except at some of those very near the coast; thus the range for the month was unusually large.

The precipitation was about one inch below the normal on the southern coast, but considerably above the average in the northern and western districts. The heaviest hailstorm occurred on the 14th, and did the most damage in the upper Connecticut valley at Greenfield; thousands of dollars of damage was done to windows, and in other towns farther east much glass was broken.

The month of July was characterized by excessive heat, great range in temperature, large amount of sunshine, low humidity, deficiency of clouds and a lack of rainfall.

Unusually low temperatures occurred on the 4th, 6th and 17th; light frosts being reported in some low lands. High temperatures were experienced from the 10th to 15th and from the 22d to 29th; the last period was the hottest spell of weather felt in Massachusetts for several years.

The amount of sunshine recorded at Blue Hill was the largest ever recorded for any month during the seven years of observation. Very little rain fell in any section of the State from the 4th to the 28th, and this, coupled with the intense heat, caused an unusually sharp though not unusually severe drought. The greatest damage was probably done to potatoes, although grain, garden truck, pastures and newly mowed fields suffered to considerable extent. The drought ended with heavy thunder-storms on the 28th and 29th in the central and western sections, and a heavy north-east rain on the 31st.

The weather for Massachusetts for the month of August was characterized by a nearly average temperature, air

pressure and sunshine, while the precipitation was above the average in the central counties and at or below the average in the eastern.

The maximum temperature occurred generally on the 10th, ranging from 88° to 98° . The minimum was felt on different dates at different stations, and was about 50° ; hence the range for the month was not nearly so large as was experienced in July.

The dry weather that prevailed during the greater part of July was continued through most of August in Plymouth and Bristol counties, causing damage to nearly all crops there; fruit dropped badly, field and garden crops dried up for want of water, and fields and pastures turned brown and bare. But in the central and western parts of the State seasonable rains fell, and all vegetation was given rapid growth.

The local storms were heavy and frequent, and much damage was done by lightning.

The month of September had in Massachusetts very nearly a normal temperature, a deficiency of rainfall except in the vicinity of New Bedford, and an air pressure and amount of sunshine above the average. Few storms influenced the weather, it being controlled during the greater part of the time by anti-cyclones or fair weather areas. At Boston twenty-one days were recorded as cloudless during the month.

The highest temperature occurred on the 19th, ranging slightly over 80° . The lowest was on the 21st or 30th, and was very near the freezing point of water. Thus, while the monthly range was not large, the daily ranges were very strong and generally rapid. While at Taunton light frosts were reported on twelve days and killing frosts on three, at Fitchburg no frost had occurred at the end of the month. Over the greater part of the State the damage by frosts was very slight. In this respect the season has been unusually favorable, both during the late spring and the early fall.

At New Bedford the rainfall was over three inches; two inches and over fell in the south-eastern part of the State and in the extreme west, while from one to two inches only was registered in all the central districts. Thunder-storms were few, but that of the 26th was very severe and did considerable damage.

Meteorological Data for October, 1892.

[Furnished by New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Cloudy.	Partly Cloudy.	Cloudless.
Monroe, .	45.1	70	8	27	29	1.57	8	—	9	7	15
Springfield, .	51.1	74	14	30	25	0.97	6	W.	7	18	6
Royalston,* .	49.5	72	15	38	25	0.62	3	—	—	—	—
Fitchburg,* .	47.6	70	8	33	†	0.62	5	W.	12	6	13
Worcester, .	51.2	78	14	32	25, 29	0.58	6	W.	9	15	7
Dudley, .	49.6	75	14, 15	29	25	1.49	8	—	—	—	—
Framingham.	49.6	77	14	23	28	1.28	7	—	—	—	—
Concord, .	48.4	76	14	24	29	1.71	8	—	—	—	—
Lowell, .	49.7	76	14	28	29	1.38	6	—	—	—	—
Boston, .	52.7	78	14	36	25	2.31	7	W.	9	7	15
Taunton, .	50.6	80	14	24	29	1.56	5	N.W.	9	12	10
New Bedf'd, .	51.2	77	14	28	29	1.85	8	—	—	—	—
Hyannis,* .	54.2	74	4	36	25	2.07	7	—	5	11	15
Provincet'n, .	51.8	72	14	33	18	2.36	6	W.	9	7	15

* Data from thermometer not self-registering.

† Minimum on 25th, 28th, 31st.

Summary.

Temperature (F.).—Monthly mean, 50.2°; highest monthly mean, 54.2°, at Hyannis; lowest monthly mean, 45.1°, at Monroe; maximum, 80°, at Taunton on the 14th; minimum, 23°, at Framingham on the 28th; range, 57°; greatest local monthly range, 56°, at Taunton; least local monthly range, 38°, at Provincetown; greatest daily range, 35°, at Dudley on the 2d; least daily range, 4°, at Boston on the 15th. Average temperature for October at Springfield for twenty-five years, 50.7°; average for October, 1892, 51.1°; departure, +0.4°. Average temperature for October at Boston for twenty-two years, 51.6°; average for October, 1892, 52.7°; departure, +1.1°.

Precipitation.—Average, 1.46 inches; greatest, 2.36, at Provincetown; least, 0.58, at Worcester. Average for October at Springfield for forty-five years, 4.13 inches; for October, 1892, 0.97; departure, —3.16. Average for

October at Boston for twenty-two years, 4.11 ; for October, 1892, 2.31 ; departure, — 1.80.

Prevailing wind. — West.

Thunder-storms occurred on the 5th and 16th.

Aurora. — At Hyannis on the 12th and 17th.

REMARKS.

The weather for the month of October was unusually mild and pleasant. At Blue Hill Observatory the mean temperature was the highest for October in seven years, while the mean humidity and cloudiness were the lowest, and the total precipitation and number of rainy days the smallest, for eight years.

The highest temperature occurred on the 8th or 14th, and the lowest on the 25th, 28th or 29th. The maximum was not unusually high, and the minimum was not so low as is generally recorded. At Newburyport no general killing frost has occurred, and at Leominster the first frost to injure vegetation on high lands was on the 28th. The observer at Chestnut Hill reports that wild violets were picked on the 25th. The observer at Taunton reports that the weather continues unusually mild, and in many places dandelions and roses are in blossom. The number of rainy and cloudy days was small, and the amount of sunshine was in excess.

The precipitation was much below the usual amount in all parts of the State. At Springfield it was the least ever recorded in October in forty-five years of observation ; the nearest to this year's amount is 1.21 inches in 1876. One observer at Fitchburg writes : " Precipitation remarkably small. Nothing like it in my record of nine years past, the nearest being October, 1884, when the amount was 1.98 inches." At Clinton the fall for the month was only 0.39 inch.

This lack of precipitation, coming after several months of small rainfall, causes a general drought.

The thunder-storm on the 16th was quite severe in the vicinity of Mansfield and in Connecticut. Mr. E. D. Miner was killed by lightning at North Stonington, Conn., during this storm.

CROPS OF THE YEAR.

The general opinion of correspondents the first of June was that the season was cold and backward, but that it promised to be a favorable one for the farmer. The winter was quite favorable for stock. April was dry and cool. May was wet, and planting was delayed. Most correspondents referred to the presence of the tent caterpillar. The correspondent in Dighton reported a new insect on the strawberry plant. Nearly all correspondents were agreed that it was very difficult to get first-class farm help. Judging by the returns, it was thought that twenty-two dollars per month and board was the average of wages paid for such help.

The first of July corn was reported as backward, but of good color and growing well, with acreage increased. Sweet corn was reported as rotting badly in Nantucket. Haying had been delayed by wet, cloudy weather since June 22, and considerable cut grass was damaged. It was thought that the crop as a whole would be an unusually large one. A correspondent in Franklin County reported old mowings as badly winter killed. Considerable complaint was made in Worcester County of damage by spittle insects. The acreage of early potatoes was reported as about the same as last year, with condition generally good. There appeared to be little change in the quantity of dairy products, as compared with previous years. Pastures were reported as being in good condition. There was very general complaint of raspberry canes having been winter-killed. Generally, the strawberry crop was a good one. Other small fruits, excepting cherries and pears, promised well.

August 1, about an average hay crop, of excellent quality as a rule, was reported as secured. The weather for securing the crop was very favorable. Yield of early potatoes, where dug, reported as light. Average price per bushel received was one dollar, the range being from sixty cents to two dollars. Dry weather had greatly injured late potatoes, especially on high lands. Quite general complaint was made of apples dropping from the trees. The bloom was good, and many apples set. Up to the middle of July pastures were in excellent condition, but drought greatly injured

them, and many correspondents reported them as being dried up. Rye, generally, was a very good crop, and harvested in good condition. Small fruits were shortened in yield by drought. Tobacco doing well. Oats rusting some.

September 1, corn generally promised to be a good crop. Rowen promised to be very near if not quite an average crop, although very light in south-eastern sections. The oat crop averaged well with last year. Potatoes not promising well, and some complaint of blight and rot. Apples reported as still dropping. Pastures very much improved by rains. Onion crop uneven in condition and yield. Celery looking well, but late. Tobacco generally harvested, and a very good crop. Cranberries promised less than an average crop. Some complaint was made of the presence of the horn fly on cattle.

October 1, a majority of the returns of correspondents indicated Indian corn to be a full average, and that the crop was secured in excellent condition. Crop estimated at not less than 2,250,000 bushels, valued at \$1,800,000. Some complaint from Barnstable County of injury to the ears by worms boring into them. Crop below the average in south-eastern sections. Rowen in central and western sections a full average crop, but light in eastern and south-eastern sections. An average amount of fall seeding done, and now looking well. Correspondents were about evenly divided in their opinion as to whether the onion crop was an average or below an average. The chief drawbacks given were blight, the maggot, drought and poor seed. Correspondents were about evenly divided in reporting potatoes as either below an average, three-fourths, two-thirds or one-half a crop. A large number referred to the quality as good or fair. Some complained of rot, especially in western sections. Most correspondents referred to the prospect for root crops as being either average, good or fair. Quite a number referred to the crop of apples as better than was expected earlier in the season. A number spoke of it as very good, others as fair. A majority, however, referred to it as two-thirds or less; quality a full average. Correspondents in the four western counties where tobacco is grown reported the crop as satisfactory in yield and quality, and that it was

curing well. The cranberry crop was estimated to be 100,820 barrels, valued at \$650,000. The acreage this year was larger than heretofore. The berries averaged small in size, but of generally good quality. The chief drawbacks to the culture this season have been from fire, span and fruit worms, drought, rot in the berry and frost. The peach, quince and grape crops have been quite good. Pears have not done very well.

In the circular to correspondents returnable on or before October 31, the following questions were asked : —

1. Have root crops proved to be average crops?
2. Have you reasons for changing last month's statements relative to potatoes and apples?
3. What is the condition of fall seeding?
4. Which of the leading crops in your locality do you think have been most profitable?
5. Which of the leading crops in your locality do you think have been least profitable?
6. Considered as a whole, has the season been a profitable one for your farmers?
7. What is the condition of farm stock?

Returns have been received from one hundred and sixteen correspondents, from which returns the following summary has been made : —

ROOT CROPS.

Seventy-seven correspondents report root crops to be average and twenty-three below average. The correspondents in Franklin and Hampshire counties are unanimous in reporting root crops as average.

APPLES AND POTATOES.

Most of the correspondents state that they see no reasons for changing their last month's estimate concerning apples and potatoes. Fourteen state that apples turned out better than was expected, and four that they did not turn out as well. Complaint is made of potatoes rotting.

FALL SEEDING.

Correspondents are practically unanimous in stating that fall seeding, especially the early, is looking as well as could

be expected, considering the small rainfall since seeding. On moist land it is looking well. Rain is greatly needed.

MOST PROFITABLE CROPS.

Fifty-eight correspondents state corn to have been among the most profitable crops; forty-one, hay; twenty-one, tobacco; seventeen, potatoes; eleven, apples; eleven, onions; six, cranberries; three, peaches; and two, rye. Corn and hay were the most profitable crops in Berkshire County; tobacco, corn and hay in Franklin County; tobacco, corn and onions in Hampshire County; corn, hay, tobacco, potatoes and onions in Hampden County; corn, hay, apples and peaches in Worcester County; corn, hay, onions, potatoes, apples and market garden truck in Middlesex County; corn, hay, onions and potatoes in Essex County; corn in Norfolk County; potatoes and hay in Bristol County; hay, corn and cranberries in Plymouth County; and cranberries and hay in Barnstable County. The good prices received for several crops compensated largely for the small yield.

LEAST PROFITABLE CROPS.

Seventy-five correspondents place potatoes among the least profitable crops; eight, apples; eight, corn; four, onions; three, squashes; two, milk; and two, strawberries. Potatoes and apples were among the least profitable crops in Berkshire and Worcester counties; potatoes in Franklin, Hampshire, Hampden, Plymouth and Barnstable counties; potatoes and squashes in Middlesex County; potatoes and corn in Essex County; strawberries in Bristol County.

PROFITS OF THE SEASON.

One hundred and three correspondents state that the season has been an average one for profit, and fifteen that it has not. The correspondents in Hampshire, Hampden and Worcester counties are unanimous in the opinion that it has been an average season for profit.

FARM STOCK.

Seventy correspondents report farm stock to be in good condition; seventeen in very good condition; ten in fair condition; nine in average condition; and six in below average condition.

NOTES OF CORRESPONDENTS.

(Returned to us October 31.)

BERKSHIRE COUNTY.

Sandisfield (G. A. SHEPARD). — Root crops average. Fall seeding in favorable condition. Grass, roots, potatoes, grain and corn have been our most profitable crops; apples have been least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition. Huckleberries and blueberries profitable this year.

Sheffield (DWIGHT ANDREWS). — Root crops average. Fall seeding in good condition. Corn has been our most profitable crop, and potatoes least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

Egremont (J. H. ROWLEY). — Root crops average. Fall seeding in good condition. Corn has been our most profitable crop; apples least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

Lee (A. BRADLEY). — Tobacco, corn and oats have been our most profitable crops; potatoes have been least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

Richmond (O. F. SMITH). — Root crops average. Fall seeding in good condition. Corn has been our most profitable crop, and potatoes least profitable. Considered as a whole, the season has been profitable. Farm stock in good condition.

Windsor (H. A. FORD). — Root crops average. Fall seeding in good condition but needing rain. Corn has been our most profitable crop; potatoes least profitable. Considered as a whole, the season has hardly been an average one. Farm stock not in as good condition as usual, owing to trouble with the horn fly.

Cheshire (L. J. NORMAN). — Root crops not up to the average. Fall seeding in good condition, but needing rain. Corn has been our most profitable crop, and potatoes least profitable. Considered as a whole, the season has been a profitable one. Owing to the horn fly, farm stock is not looking as well as usual.

FRANKLIN COUNTY.

Rowe (J. F. BROWN). — Root crops average. Fall seeding about in average condition. Corn has been our most profitable crop. Considered as a whole, the season has been a profitable one. Farm stock in good condition. The weather has been very fine, and farm work is well along. Potatoes almost all rotted, and are not of much account.

Ashfield (A. G. HOWES). — Root crops average. Apples better than was expected. Fall seeding in fair condition. Apples and tobacco have been our most profitable crops; potatoes have been least profitable. Considered as a whole, the season has been a profitable one. Farm stock is looking well.

Deerfield (CHAS. JONES). — Root crops average. Fall seeding in good condition. Tobacco has been our most profitable crop, and potatoes least profitable. Considered as a whole, the season has been a profitable one. Farm stock in fair condition. Corn is more than an average crop. Potatoes a very small crop. Oats good and rye extra good. Apples a two-thirds crop, but quality good. Onions a fair crop, and selling well. Hay about an average, quality good. Tobacco a good crop, curing well and selling at good prices.

Northfield (CHAS. POMEROY). — Root crops average. Fall seeding in first-rate condition. Tobacco and corn have been our most profitable crops; oats and onions have been least profitable. Considered as a whole, the season is fully up to the average. Farm stock in good condition. Pastures have held out better than for many years. Apples a full average.

Montague (CHAS. S. RAYMOND). — Root crops average. Fall seeding in very good condition. Tobacco and corn have been our most profitable crops, and potatoes least profitable. Considered as a whole, the season has been a profitable one. Farm stock in average condition.

Leverett (W. L. BOUTWELL). — Root crops average. Fall seeding in fair condition, though rain is needed. Tobacco and onions have been our most profitable crops; market-garden crops and potatoes least profitable. Considered as a whole, the season has been decidedly profitable. Farm stock in good condition.

Orange (ANSEL HARRINGTON). — Root crops average. Apples a little better than was expected. Fall seeding generally in good condition. Hay has been most profitable with us, and potatoes least profitable. Considered as a whole, the season has been about an average one. Farm stock generally in fair condition, though some pastures are short and the stock thin.

HAMPSHIRE COUNTY.

Belchertown (H. C. WEST). — Turnips, beets, and in fact all roots, are fine crops. Fall seeding in fair condition. Hay and corn have been our most profitable crops; potatoes have been least profitable, not more than sixty per cent of a crop. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

Amherst (Prof. WM. P. BROOKS). — Swedes and English turnips unusually good; mangolds three-fifths of last year's crop; carrots good. Early fall seeding in very good condition; late, backward because of dry weather. Tobacco, potatoes, onions and corn have been our most profitable crops. Considered as a whole, the season has been unusually profitable. Farm stock in satisfactory condition.

North Hadley (H. C. RUSSELL). — Root crops a full average. Potatoes did not yield as well as was expected. Fall seeding not in average condition, owing to dry weather. Tobacco has been our most profitable crop, and potatoes least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition. Tobacco selling slowly and at good prices.

Northampton (D. A. HORTON). — Root crops an average. Fall seeding in good condition. Tobacco crop is so much in the growers' hands that we cannot tell whether onions or tobacco have been most profitable. Potatoes have been our least profitable crop. Considered as a whole, the season has been a profitable one. If tobacco proves as good as it bids fair to, our farmers will have had the best year since 1870. Farm stock in very good condition. Corn and hay have been extra good.

Chesterfield (HORATIO BISBEE). — Root crops average. Fall seeding not in very good condition. Corn has been our most profitable crop; potatoes have been least profitable, although some fields have been good. Considered as a whole, the season has not been quite an average one. Farm stock not in good condition, flies and dry weather have injured them. Butter has been in good demand through the season and has brought a good price, but on account of flies and drought the quantity has been small. All crops excepting corn have been rather light.

Worthington (C. K. BREWSTER). — Root crops an average. Fall seeding in good condition. Never knew so fine a crop of corn. Oats have been least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition. Season has been remarkably favorable for harvesting. Full average crop of apples. Potatoes are rotting, and likely to command good prices.

HAMPDEN COUNTY.

Blandford (E. W. BOISE). — Root crops more than average. Potatoes, where not decaying badly, are very small. Fall seeding in good condition. Corn above an average crop and fully ripened. Hay and potatoes have been our least profitable crops. Considered as a whole, the season has been fairly profitable. Farm stock in average condition, though not as fleshy as some years.

Holyoke (JOHN C. THORPE). — Root crops good. Fall seeding is looking well, but needs rain. Grass and corn are our leading crops, and both have done well. Considered as a whole, the season has been a profitable one. Farm stock looking well.

Chicopee (R. W. BEMIS). — Root crops average. Apples have turned out better than was anticipated. Fall seeding in fair condition. Corn has been our most profitable crop; potatoes have been our poorest crop, but perhaps, on account of the larger price, they may be as remunerative as usual. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

Wilbraham (F. E. CLARK). — Root crops average. Fall seeding in very good condition, especially early seeding. Grass and corn have been our most profitable crops; potatoes have been least profitable, although prices have advanced so as to partially make up for the small yield. Considered as a whole, the season has been a profitable one. Farm stock in excellent condition.

Monson (A. H. WHITE). — Root crops not up to the average. Fall seeding in very fair condition. Grass and potatoes have been our most profitable crops. Considered as a whole, the season has been a profitable one. Farm stock is looking well. The blight caused potato vines to die prematurely, thus injuring the eating quality. Apples are very scarce, poor and wormy.

Brimfield (S. W. BROWN). — Root crops average. Apples are better than was expected. Fall seeding in good condition. Corn has been our most profitable crop; potatoes have been least so. Considered as a whole, the season has been fairly profitable. Farm stock in good condition.

WORCESTER COUNTY.

Warren (W. E. PATRICK). — Root crops a full average. Apples are of better quality and the yield is larger than was expected. Fall seeding on moist land looking finely; less seeding than usual on account of dry weather. Hay has been our most profitable

crop and barley least profitable. Considered as a whole, the season has been a profitable one. Farm stock in excellent condition.

Spencer (H. H. KINGSBURY).—Root crops average. Fall seeding is in need of rain. Corn has been our most profitable crop; potatoes have been least profitable. Considered as a whole, the season has been a profitable one. Farm stock is thriving and in good health. The weather has been very favorable for harvesting, and fall work is well along.

New Braintree (C. D. SAGE).—Root crops hardly up to the average. Apples a little better than was expected. Fall seeding has suffered for want of rain. Hay, corn and fodder corn have been our most profitable crops; oats and rye have been least profitable. Considered as a whole, the season has been more than an average one. Farm stock is looking well, and cows are doing well. Dairy products have sold readily at fair prices.

Oakham (JESSE ALLEN).—Fall seeding in good condition. Milk has been most profitable with us, with corn next; apples have been least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

Dana (E. A. ALBEE).—Root crops a good average. Fall seeding not in as good condition as usual, on account of dry weather. Corn has been our most profitable crop; potatoes have been least profitable. Considered as a whole, the season has been an average one. Farm stock in fair condition. Cows have shrunk in milk more than usual, on account of short feed.

Templeton (LUCIEN GOVE).—Root crops average. Apples of good quality. Fall seeding not in very good condition. Corn, hay, cabbages and small fruits have been most profitable; potatoes, apples, pears, squashes and beans least profitable. Considered as a whole, the season has been reasonably profitable. Farm stock in average condition. Apples not a full crop but quality extra. Corn harvested in splendid condition.

Winchendon (W. H. SAWYER).—Root crops a full average. It has been too dry for fall seeding to catch well. Corn has been our most profitable crop; potatoes have been least profitable. Considered as a whole, the season has been a profitable one. Farm stock about in average condition.

Westminster (JOSEPH HAGER).—Root crops a full average. Fall seeding in average condition. Corn and root crops have been most profitable; potatoes have been our least profitable crop. Considered as a whole, the season has been fully up to the average. Farm stock in very good condition. The apple crop was very good, but the opportunity to dispose of it was limited.

Holden (G. S. GRAHAM). — Root crops a full average. Fall seeding has suffered for want of rain. Corn has been our most profitable crop. Considered as a whole, the season has been more than usually profitable. Farm stock in very good condition. Potatoes have in some cases been very light, but the extra price on the whole more than makes up.

Worcester (S. A. BURGESS). — Root crops a good average. Fall seeding in quite good condition. Apples, corn and hay have been our most profitable crops; potatoes have been least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

Grafton (S. E. STOWE). — Root crops average. Fall seeding in excellent condition. Corn has been our most profitable crop; potatoes have been least profitable, although the large price helps to make up for the small crop. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

Southbridge (G. L. CLEMENCE). — Root crops average. Fall seeding in good condition. Corn has been our most profitable crop; potatoes have been least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

Blackstone (L. R. DANIELS). — Root crops average. Fall seeding in fair condition, but early seeded fields are looking much the best. Hay has been our most profitable crop, and potatoes least so. Considered as a whole, the season has been a profitable one. Farm stock in good condition.

MIDDLESEX COUNTY.

Hopkinton (W. V. THOMPSON). — Root crops not up to the average. Fall seeding in good condition. Potatoes have been our most profitable crop. Considered as a whole, the season has been a profitable one. Farm stock in good condition. The weather has been very favorable for harvesting.

Weston (H. L. BROWN). — Root crops average, carrots better than usual, beets and turnips good. Fall seeding looking finely on low, moist land. Cabbage and sweet corn have been our most profitable crops; potatoes have been least profitable, with squashes nearly as bad. Considered as a whole, the season has been a profitable one. Farm stock in good condition. Farmers who make market gardening their business have had a remarkably good year.

Arlington (W. W. RAWSON). — Root crops an average. Onions, cabbage, roots and tomatoes have been our most profitable crops.

All crops have done well. Considered as a whole, the season has been a profitable one. Farm stock in very good condition. Celery crop very light, but quality good.

Concord (WM. H. HUNT). — Root crops an average. Apples have turned out better than they promised. It has been rather dry for newly seeded fields, except on low ground. Asparagus, sweet corn and onions have been our most profitable crops. Considered as a whole, the season has been a profitable one. Farm stock in average condition. All truck crops have done well, and have sold for very much higher prices than in 1891.

Groton (DANIEL NEEDHAM). — Fall seeding in as good condition as last year, but not up to the average. Farm stock in good condition. Not a year since 1872 has yielded such generous results in money for field, garden and orchard products as this. Pastures have kept green; dairy products have kept above the normal; hay has been abundant, and commanded a good price; potatoes have yielded well, and a quick and strong market has brought buyers at high prices; our apple crop has been large, and many have received \$1.20 net per barrel for No. 1's.

Westford (ARTHUR WRIGHT). — Root crops an average. Fall seeding has been somewhat affected by drought. The hay crop has been the most profitable with us. Potatoes have been our lightest crop, but have brought good prices. Considered as a whole, the season has been a profitable one. Farm stock in good condition. Small fruits, peaches and apples have been profitable this season.

Billerica (J. N. PARDEE). — Root crops fully up to the average. Apple crop much larger than was expected; quality excellent. Late potatoes generally a failure. Fall seeding in good condition. Sweet corn has proven especially profitable. Squashes have been our least profitable crop. Considered as a whole, the season has been the most profitable for several years. Farm stock generally in good condition. Fall feed still excellent, and farmers generally encouraged.

ESSEX COUNTY.

North Andover (PETER HOLT, Jr.). — Root crops not up to the average. Fall seeding has made slight growth, on account of dry weather. Early potatoes have been our most profitable crop; field corn has been least profitable. Considered as a whole, the season has been an average one. Pastures have suffered from drought, and cattle are thin.

Haverhill (EBEN WEBSTER). — Root crops not quite up to the average. Apples turned out somewhat better than was expected.

Fall seeding in good condition. Corn and hay have been our most profitable crops; potatoes have been least profitable. Considered as a whole, the season has been fairly profitable. Farm stock in good condition.

West Newbury (J. C. TARLETON).—Root crops very good. Potatoes and apples not quite as good as was expected. Fall seeding in rather poor condition. Onions and cabbage have been our most profitable crops; potatoes have been least profitable. Considered as a whole, the season has been about an average. Farm stock rather thin, except when fed in stall.

Topsfield (B. P. PIKE).—Root crops average. Fall seeding in average condition, but rather later than usual. Potatoes have been our most profitable crop, and the squash crop the least profitable. Considered as a whole, the season has been a profitable one. Farm stock in good condition. The apple and potato crops were very irregular, some having full crops and others very light ones.

Ipswich (O. C. SMITH).—Root crops not more than seventy-five per cent of an average. Fall seeding caught well, and is looking well. Hay has been our most profitable crop; corn and potatoes have been least profitable. Farm incomes will not average more than seventy-five per cent of the usual profit. Stock is in good condition. All crops more or less injured by drought. Many wells now dry.

Marblehead (WM. S. PHILLIPS).—Root crops a good average. Potatoes have not turned out as well as was expected. Fall seeding in very good condition. Early squashes were as profitable as any crop. Potatoes and onions are high, but not many have them. Considered as a whole, the season has been about an average one. Farm stock in very good condition.

NORFOLK COUNTY.

Cohasset (E. E. ELLMS).—Root crops average. Fall seeding in good condition. Hay has been our most profitable crop, and potatoes least profitable. Considered as a whole, the season has not been a profitable one. Farm stock in good condition.

Millis (E. F. RICHARDSON).—Root crops not quite up to the average. Fall seeding in fair condition. Potatoes have been our most profitable crop. Corn has been least profitable. Considered as a whole, the season has been fairly profitable. Farm stock in good condition.

Medway (M. MORSE).—Root crops not quite an average. Fall seeding in good condition, where sown early. Corn has been

most profitable, and tomatoes for canning the least profitable, of our leading crops. Considered as a whole, the season has been fairly profitable. Farm stock in good condition.

Franklin (C. M. ALLEN). — Root crops about seventy-five per cent of average. Apples a little better than was expected. Fall seeding in medium condition. Corn has been our best crop. Potatoes the smallest crop, but the high price will in part make up for it. There has not been much profit this season, but it is an average year. Farm stock in average condition.

BRISTOL COUNTY.

Attleborough (ISAAC ALGER). — Root crops not an average. Fall seeding in good condition. Considered as a whole, the season has been fairly profitable. Farm stock in fair condition.

Raynham (N. W. SHAW). — Root crops not up to the average. Apples and potatoes not as large crops as was expected. Fall seeding in fairly good condition. Hay has been our most profitable crop, though little rowen was cut. Potatoes have been least profitable. Considered as a whole, the season has not been a profitable one. Farm stock in fair condition, having most of its feed from the barn for the last two months.

Dighton (A. W. PAUL). — Root crops not up to the average, on account of dry weather. Fall seeding in average condition. Potatoes have been our most profitable crop and strawberries least profitable. Considered as a whole, the season has not been a profitable one. Farm stock about in average condition. All crops have suffered from drought. No rowen. Apples ripened prematurely and rot badly. Probably more wells dry than ever before.

Swansey (F. G. ARNOLD). — Roots a full average. Fall seeding has started well, but needs rain. Potatoes have been our most profitable crop. Considered as a whole, the season has been a profitable one. Farm stock is grained for milk, and is in good condition.

Dartmouth (L. T. DAVIS). — Root crops will be fully up to the average. Fall seeding in fine condition. Considered as a whole, the season compares favorably with the average. Farm stock in good condition. Fodder corn and hay have been good crops, which is advantageous for milk production, our chief industry.

PLYMOUTH COUNTY.

Marshfield (G. J. PETERSON). — Root crops below the average. Fall seeding an average, and winter rye is looking well. English hay has been our most profitable crop; potatoes and roots have

been least profitable. Considered as a whole, the season has been fairly profitable. Farm stock in good condition.

Kingston (J. H. CUSHMAN). — Root crops up to the average, turnips not harvested, but looking well. Apples large, and quality better than was expected. Fall seeding in fine condition. The hay crop has been most profitable and the potato crop least so. Considered as a whole, the season has been a profitable one. Farm stock rather thin, except when stall fed.

Halifax (G. W. HAYWARD). — Turnips are an average crop; all other root crops small. Fall seeding has come well, but does not grow. Hay and corn have been our most profitable crops; potatoes, apples and beans have been least profitable. Considered as a whole, the season has been fairly profitable. Farm stock is in very good condition.

Middleborough (ELBRIDGE CUSHMAN). — Root crops thirty-three per cent below average. The apple crop has proved somewhat better than was expected. Fall seeding in very good condition. Hay and rye have been our most profitable crops. Turnips, potatoes, rowen, and in fact all crops that were starting during the drought, have been unprofitable. Considered as a whole, the season has hardly been an average one. Farm stock not quite in average condition. Quality and price of potatoes very good, compensating in a measure for small yield.

Wareham (A. SAVARY). — Root crops below average. Fall seeding in good condition on low land, but has suffered from drought on high land. Hay and cranberries have been our most profitable crops; corn and potatoes have been least profitable. Considered as a whole, the season has not been a profitable one. Farm stock in fair condition. We are still suffering from want of rain, which has injured fall feed, making it necessary to commence foddering earlier than usual. Cranberries are not keeping well, and are bringing a much less price than was expected.

BARNSTABLE COUNTY.

Falmouth (D. R. WICKS). — Root crops an average. Fall seeding in good condition. Hay has been our most profitable crop. Potatoes have been least profitable. Considered as a whole, the season has not been a profitable one. Farm stock fully up to the average in condition. Turnips came up late, but have made good growth.

Barnstable (JOHN BURSLEY). — Root crops a full average. Apple crop a little better than was expected. But little fall seeding done, and that late. Cranberries and hay have been our most

profitable crops. Considered as a whole, the season has been a profitable one. Farm stock in average condition.

Dennis (JOSHUA CROWELL).—Root crops hardly an average. Condition of fall seeding below average, on account of dry weather. Farm stock in fair condition. Considered as a whole, the season has not been very profitable in this vicinity. Cranberries are the leading crop, and probably the most profitable, but are very much below the average in quantity and price.

Eastham (J. A. CLARK).—Root crops not up to the average. Asparagus and late turnips have been our most profitable crops. Potatoes have been a total failure with many. Worms in the ear have damaged corn badly. Considered as a whole, the season has been an average one, with perhaps better than average prices. Farm stock in fair condition.

DUKES COUNTY.

West Tisbury (WM. J. ROTCH).—Root crops average. Fall seeding in good condition. Hay and potatoes have been our most profitable crops; corn has been least profitable. Considered as a whole, the season has not been an average one. Farm stock rather below an average in condition.

NANTUCKET COUNTY.

Nantucket (C. W. GARDNER).—Root crops a good average. Fall seeding suffering for want of rain. Corn has been our most profitable crop, and potatoes least profitable. Considered as a whole, the season has not been a profitable one. Farm stock in very good condition.

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